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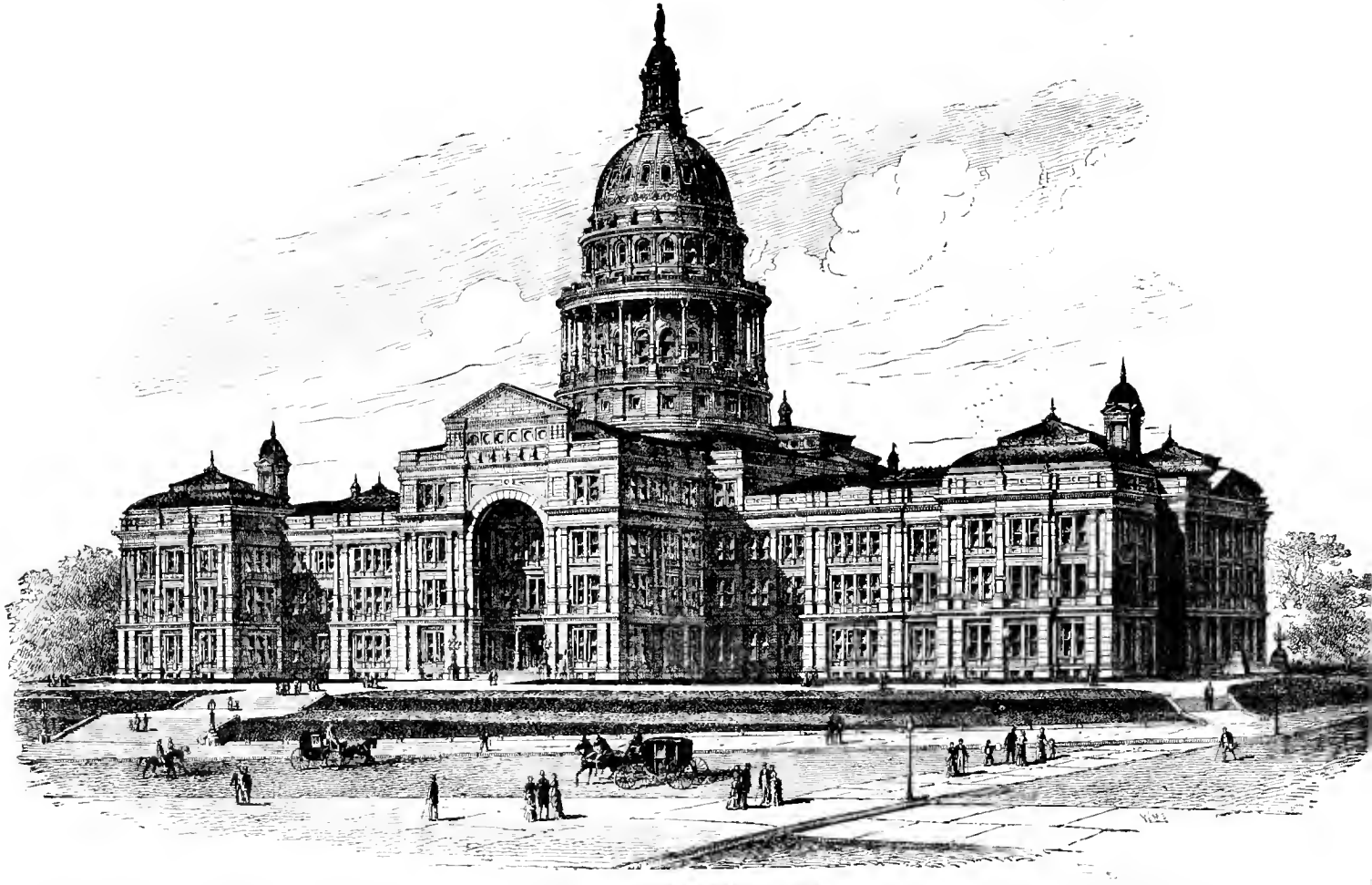
TEXAS

ALONG THE LINE OF THE

TEXAS & PACIFIC RY.

To people seeking New Homes, Good Health, an Enjoyable Climate, a Fruitful Soil and New Opportunities, this book is specially dedicated.

PUBLISHED BY THE
PASSENGER DEPARTMENT
OF THE
TEXAS & PACIFIC RAILWAY,
DALLAS, TEXAS.



TEXAS

ALONG THE LINE OF....

THE TEXAS & PACIFIC RAILWAY. (A BIRD'S-EYE VIEW.)

EVERYBODY knows where Texas is, and hence a minute description of this grand State by metes and bounds will hardly be deemed necessary. When speaking of Texas, it must be borne in mind that an expanse of country, 825 miles long and 740 miles wide, containing an area of 252,514 square miles, is under consideration. It is a territory larger than all the New England States combined, and greater in area than any two States situated east of the Mississippi River. Compared to the countries of Europe, it has 34,000 square miles more than the Austrian Empire, 62,000 more than the German Empire, and nearly 70,000 square miles more than France.

It can hardly be expected that there should be in so vast a domain, a uniformity as to soils, climate or resources, indeed the surface of the State presents a variety of features, common to no other commonwealth in the United States. It is a vast inclined plain, with a gradual descent from the northern and northwestern boundary to the Gulf of Mexico. For convenience of description, it has, by general custom, been divided geographically into five parts, commonly known as Central, Northern, Southern, Eastern and Western Texas, though the dividing lines are not by any means well defined. In this publication it is intended to more fully describe Northern and Western Texas, which are traversed by the Texas & Pacific Railway, yet such description would be incomplete without reference to the other parts of the State.

The chief characteristics of the Gulf Coast are extensive flat prairies, extending inland from 50 to 80 miles, forming a broad belt of dark fertile soil and following the contour of the coast. Seaward a few miles distant, separated from the mainland by long but narrow bays, is a chain of islands and peninsulas, extending in a very regular line from Sabine Lake to Corpus Christi, and thence to the mouth of the Rio Grande. In many places along the coast the change from terra firma to tidewater is almost imperceptible, owing to the very gradual slope of the land. The soils of the coast counties are as a rule very fertile, producing abundantly of early vegetables, sugar cane, corn, rice, sea-island cotton and semi-tropical fruits. Artificial drainage is necessary in many places, and in some localities new comers suffer more or less from malaria and kindred ailments, though as a whole the coast country is considered salubrious and healthful.

Northern Texas is generally understood to mean the first three or four tiers of counties south of Red River, west of the 96th meridian and extending westward to a line drawn from Henrietta south to Dublin. Along Red River the prevailing soils are red sandy loams, changing into gray and black loams further south. Beyond these are the famous black waxy lands, noted for their great crops of small grain, cotton, corn and hay. A fringe of timber extends along Red River, and along the western edge of this division of the State are two long narrow belts of timber known as the Upper and Lower Cross Timbers. Along the various streams is also a good growth of forest, but as a whole this part of Texas should be designated a rich prairie country.

Northwest of northern Texas is a territory of some 45,000 square miles, commonly known as the Texas Panhandle, a vast expanse of open prairie covered with a luxuriant growth of nutritious grasses, affording pasturage for the great herds of cattle and flocks of sheep for which Texas is noted. This vast plain varies in altitude from 2,000 feet to 5,000 feet.

Eastern Texas, including some eighteen counties, is heavily timbered with fine merchantable woods, and from here are drawn nearly all the immense supplies of pine lumber required in the prairie portions of the State. A long range of low hills, containing large deposits of brown hematite iron ore, runs through this region from northeast to southwest. Large beds of lignite and potters' clays are found in several places, and the natural resources afford many opportunities for industrial developments. The prevailing soils are light sandy loams in the pineries and ferruginous clays on uplands. The bottom lands are usually dark sandy loams, all of them fairly fertile and very well adapted to the cultivation of fine fruits and commercial truck gardening. Fair crops of corn, cotton and cereals are also produced.

Central Texas embraces the rich prairie region between the coast lands and the northern counties, extending westward to about the 99th meridian. It is a great plain, covered with a luxuriant growth of natural grasses, interspersed occasionally with small areas of timber, and fringes of timber along the numerous water courses. While furnishing an abundance of fuel and fencing material, very little of this forest growth is available for lumber or building purposes. The prevailing soil is the "black waxy," so called from its color and adhesive qualities. It is the richest and most durable soil in the State, and is very well adapted to the cultivation of small grain, corn, cotton and hay. It varies from twelve inches to many feet in depth, is a great absorbent and retainer of water, and is not appreciably affected by washing. Commercial fertilizers, so commonly used in the States east of the Mississippi, are not at all used in Texas, and black waxy lands have been in continuous cultivation for 30 years without any material decrease in the yield. This region has no local causes for diseases and public health is good, excepting possibly some slight malarial ailments along some of the river bottoms.

Western Texas may be said to include all of the country west of the 99th meridian. For a distance of 50 to 100 miles west of the dividing line, the country is more or less undulating, rolling or broken, covered in part with an

abundant growth of post oak, black jack and other timber. Interspersed are small prairies, with a scattering growth of mesquite timber, and numerous small but very fertile valleys. In this part of western Texas there is considerable variety in the soils, there being some sandy areas, covered with scrubby oak, mesquite flats of a rich brown loam, and small valleys with black heavy soils. Along the Brazos River and its tributaries are large areas of chocolate colored and red loams of great fertility. Beyond this timber belt are the great level prairies, rising in a series of table

GATHERING WATERMELONS IN TEXAS.

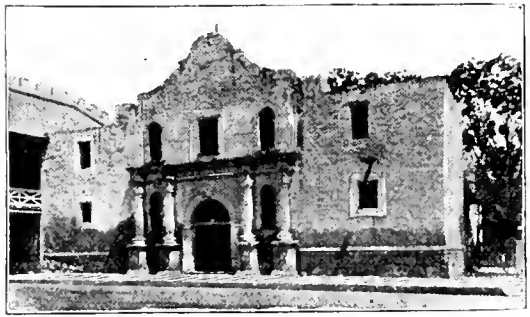
lands from southeast to west and northwest until they reach the western State boundary. They include the famous "Llano Estacado" and the Trans-Pecos Country, with its irrigated lands, its great high table lands and still higher mountain ranges. The altitudes vary from 1,500 feet to 6,000 feet. This portion of the State, though containing a great number of farms, is essentially a stock-raising country, and the raising of live stock forms the principal source of revenue of the inhabitants.

HISTORICAL.

THE aboriginal inhabitants of Texas were the Indians of the Tonkaway, Caddo, Waco, Lipan, Kickapoo, Comanche, and other savage tribes, and the Pueblo, or Agricultural Indians, along the Rio Grande and the Rio Pecos. Along the Rio Grande, the latter had numerous well fortified towns and maintained municipal governments. Indeed, it is claimed by some of the Pueblo tribes, that there existed, some 400 years before the Spanish conquest, a nation or confederation of Pueblo tribes, whose towns and settlements extended from the Colorado River of the West to the Pecos River, but that the same was destroyed, in the course of time, by civil wars, disagreements among the tribes, incursions of savage tribes from the North and East, and migrations resulting from violent earthquakes. The ruins of large cities and of great irrigation works still found in this region, and the relationship by blood and marriage of the tribes of the Gila River and the Rio Grande lend a color of truth to these traditions. What cohesion there remained of the old confederation of tribes was effectually broken up by the Spanish conquest. Only once since the conquest was there concerted action among the tribes, and that was during the Pueblo rebellion, in the 17th Century, when they drove the Spaniards out of New Mexico and Texas, and for half a century maintained an independent government.

The first visit of the Spaniards to Texas was made by Don Alvar Nunez Cabeza de Vaco, in 1525, who explored the course of the Rio Grande far into New Mexico, marched eastward to the Pecos, followed its course southeasterly, visited the headwaters of the Concho River and returned to Mexico. During his journey, he visited nearly all the Pueblo towns then existing, and in 1529 took possession of the country in the name of the King of Spain. In 1582, one Espejo, in command of a company of soldiers and monks, reached El Paso, on the extreme western frontier of Texas. On their arrival, they formed a mission for the conversion of the natives. A colony of Spaniards, under Don Antonio de Otermin, settled there in 1681. The natives, the Tihua tribes of the Pueblo Indians, whose descendants still cultivate the lands in the Rio Grande Valley, claim that they had well-built towns in the Valley as early as the 12th Century, and that Chihua, now the town of Ysleta, and a station on the line of the Texas & Pacific Railway, was built some 200 years before the arrival of the Spaniards, and that among themselves they still maintain municipal government, as it came down to them in regular succession. If their claims can be substantiated,

SAN ANTONIO
MISSIONS.



CHURCH OF THE ALAMO.

MISSION CONCEPCION.

MISSION SAN FRANCISCO.

MISSION SAN JOSE.

MISSION SAN JUAN.

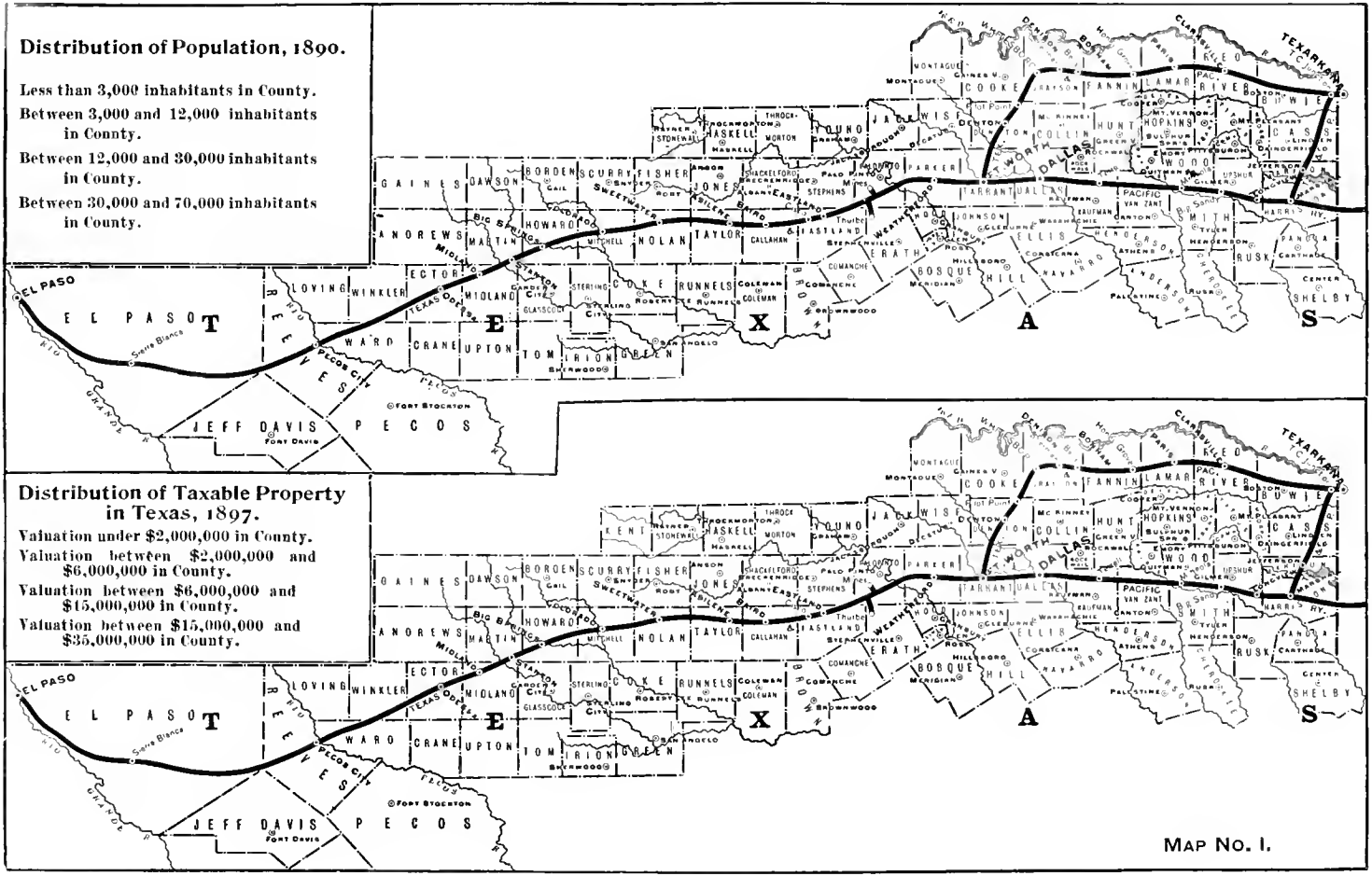
the town of Ysleta has had 500 years of continuous municipal government, originally Indian, then Spanish, then Mexican, and now American. The Tihuas, also spelled Tehuas, were the strongest Pueblo tribe along the Rio Grande, at the time of the Spanish conquest. They maintained several large towns and had garrisons in others. The name of this tribe was probably given by the Spaniards to the territory they occupied—Texas.

In 1685, Robert de la Salle, in company with 300 Frenchmen, while searching for the mouth of the Mississippi River, landed at what is now known as Matagorda. At a place now known as Dimmitt's Point, he erected Fort St. Louis, and named the country Louisiana, in honor of Louis XIV. This fort was captured by the Indians a few months later and the garrison was either killed or made captive. The French laid claim to the country by virtue of La Salle's discovery. The King of Spain claimed it under prior discoveries, and sent a force under command of Alonzo de Leon, to dislodge the French, but he found the fort in ruins. The French prisoners among the Indians were recovered and kindly sent to their friends.

De Leon again visited Texas in 1690, and established missions among the Indians at Presidio, on the Rio Grande. In 1692, the settlement and mission of San Fernandes, now San Antonio, was begun. The missions of Goliad and Nacogdoches were founded in 1717, and the mission of the Alamo in 1744. The work of establishing missions was continued up to 1790, and in 1794 all missions were secularized. In 1762, France ceded to Spain all its claims made by virtue of La Salle's discovery. In 1800, Louisiana again became a colony of France, and in 1803, Napoleon Bonaparte sold it to the United States. In 1819, the Sabine River was fixed as the southwestern boundary of Louisiana.

Texas remained under Spanish dominion from 1661 to 1822, 161 years, and had, during that period of time, 22 Spanish governors. From 1822 to 1835, it was part of Mexico, and had, during that time, 7 Mexican governors. In 1823, Stephen F. Austin, with a colony of 300 families, arrived at San Antonio. The Mexican States of Coahuila and Texas were at that time under one government. In order to promote the settlement of Texas, very liberal concessions had been granted, and under these, Americans came in rapidly, up to 1835, when the Texan revolution broke out. The failure of the Mexican government to carry out the terms of the agreement, and the attempt to enforce new and onerous laws and restrictions relating to political and religious matters, provoked a determined resistance, which resulted in the Mexican defeat at San Jacinto, and the capture of the Mexican President, Santa Anna. From 1835 to 1846, Texas was an independent republic, existing as such 11 years. During that period of time it had 6 presidents. On July 4th, 1845, an agreement of annexation to the United States was ratified by the Convention of Texas, and on December 29th, 1845, the Congress of the United States, by joint resolution, declared Texas annexed to the Union. From 1846 to the present time, Texas has been a State of the United States, and during these 52 years, has had 24 governors, elected by the people. Texas seceded from the Union, February 1st, 1861, but was reinstated in 1870. From 1661 to 1898, 237 years, Texas has been under some form of organized government.

LUMBER INDUSTRIES IN TEXAS.


Distribution of Population, 1890.
Less than 3,000 inhabitants in County.
Between 3,000 and 12,000 inhabitants in County.
Between 12,000 and 30,000 inhabitants in County.
Between 30,000 and 70,000 inhabitants in County.
Distribution of Taxable Property in Texas, 1897.
Valuation under $2,000,000 in County.
Valuation between $2,000,000 and $6,000,000 in County.
Valuation between $6,000,000 and $15,000,000 in County.
Valuation between $15,000,000 and $35,000,000 in County.
T E X A S
EL PASO
JEFF DAVIS
PECOS
REEVES
WARD
CRANE
UPTON
TOM
IRION
GREEN
LOVING
WINKLER
ECTOR
MIDLAND
STANTON
GLASSCOCK
STERLING
COKE
RUNNELS
COLEMAN
BROWN
MITCHELL
NOLAN
TAYLOR
CALLAHAN
EASTLAND
ERATH
COMANCHE
BOSQUE
HILL
HOWARD
MARTIN
BORDEN
SCURRY
FISHER
JONES
SHACKELFORD
STEPHENS
PALO PINTO
PARKER
TARRANT
DALLAS
ELLIS
NAVARRO
HENDERSON
RUSK
SHELBY
CHEROKEE
ANDERSON
HOUSTON
TRINITY
HARRIS
PANOLA
CASS
BOWIE
RED RIVER
LAMAR
FANNIN
GRAYSON
COOKE
MONTAGUE
WISE
JACK
YOUNG
THROCKMORTON
HASKELL
KENT
STONEWALL
MORTON
GAINES
DAWSON
ANDREWS
MIDLAND
TEXAS ODESSA
BIG SPRING
SWEETWATER
ABILENE
BRIDGEPORT
WEATHERFORD
STEPHENVILLE
FORT WORTH
DENTON
COLLIN
HUNT
HOPKINS
WOOD
UPSHUR
SMITH
TYLER
PACIFIC
VAN ZANT
CANTON
ATHENS
PALESTINE
NACOGDOCHES
SABINE
JASPER
LINDEN
DANGERFIELD
MT. VERNON
MT. PLEASANT
BONHAM
PARIS
CLARKSVILLE
TEXARKANA
FORT STOCKTON
FORT DAVIS
PECOS CITY
SIERRA BLANCA
RIO GRANDE R.
SAN ANGELO
SHERWOOD
BROWNWOOD
MERIDIAN
MEXIA
CORSICANA
HILLSBORO
GLEN ROSE
STEPHENVILLE
MINERAL WELLS
GRAHAM
JACKSBORO
GAINESVILLE
SHERMAN
DENISON
BONHAM
PARIS
CLARKSVILLE
TEXARKANA
MAP NO. I.

The Settlement of Texas.

WITH the passing of Mexican supremacy in Texas came a great increase of population. Thousands of hardy settlers pushed their way to the new Republic from the Southeast and brought with them their families, their live stock and other belongings. Transportation was slow and tedious, and up to 1870 the counties near the Gulf of Mexico and those convenient to the several navigable streams, received the greater part of the immigration that came to the State. Systematic farming could be carried on profitably only in such localities where transportation was easy. Corn and small grain were principally grown for home consumption, cotton being the principal article of export. In the agricultural regions, a number of good business towns grew up, and from these were supplied the more remote localities, in which for want of economical transportation the engrossing pursuit of the inhabitants was the raising of cattle, horses and other live stock. These could travel to market on their own hoofs, and time was less valuable than now. There was considerable of home comfort and of primitive conveniences; a chronic scarcity of ready money prevailed, but most farms produced what was needed for home consumption, and the few extras needed were readily supplied by the sale of a few bales of cotton or a few steers. The manufacturing enterprises consisted of a limited number of grist mills, saw mills and cotton gins. Daily newspapers, daily market reports, crop mortgages and other incidentals of a later day were practically unknown.

During the civil war, agricultural and pastoral pursuits were practically abandoned, and at its close the State was greatly impoverished. The great forests of yellow pine and valuable hardwoods in eastern Texas had hardly been touched by the woodman's axe. Steam saw mills were few and far between, and lumber was laboriously hauled several hundred miles by ox teams and was high in price. From the timber belt to the Brazos River were vast stretches of rich black prairies, sparsely stocked with cattle, and dotted here and there with a small town and a struggling agricultural community. Beyond the Brazos, the Comanche, Lipan, Kickapoo and other tribes made the country unsafe, the few settlements existing being generally in the vicinity of some Government Fort.

Between 1870 and 1882 was the period of greatest activity in railroad construction, and most lines now in operation were built at that time. Quick, cheap and easy communication was established with the important trade centers of the North and East and St. Louis, Kansas City and Chicago became active competitors for Texas lumber, cotton, cattle, wool and small grain. The new railways brought to the State new people, new wealth, new industries, new markets, new demands for products, which were before that time salable only in limited quantity. The immigration poured into the State like as unto a crevasse pouring over a retaining dyke. The waters first reach the lower

levels through numerous channels in all directions. So with the human tide which poured in and distributed itself over a vast area, opening up farms and building new towns where easy transportation was assured. The mild climate, the fruitful soils, the great diversity in production and the very low values of real estate attracted many thousands of new settlers, who created a demand for food products unheard of before, and an era of prosperity was inaugurated which has never flagged since. Hundreds of thousands of new farm homes were founded, more railroads were built, hundreds of saw mills, flouring mills, grist mills, cotton gins and other establishments were erected, cities and towns sprang up as by magic, and the foundation of an Empire was laid and built to last for all time. In less than one generation the limit of successful agriculture was moved from the piney woods of east Texas to the flower bedecked prairies along the 100th meridian, and far beyond this under the shadows of the Rocky Mountains, men have turned to account the limpid waters of the mountain streams, impounded them, led them through canals and ditches to make fruitful farms amid great pastures. The immigrant has crowded the stockman far beyond the Brazos River, and he in turn crowded out the Comanche Indian and his brethren. Yet the work of settlement is not finished; another generation will have to complete the work. Railroads now gridiron the eastern third of the State, the most fertile region in America, maintaining a population of over 2,000,000, and the northwestern, western and southwestern regions contain fully 1,000,000 more.

In 1850 the population was 212,592, and the taxable value of property $33,322,115; in 1860, population 604,215, tax valuations $164,338,133; in 1870, population 818,579, tax valuations $170,473,738; in 1880, 1,591,749 population, and $318,960,736 taxable values. The census of 1890 shows a population of 2,235,523, and $782,111,883 in valuations. The increase in population in the 10 years from 1880 to 1890 was 40.4 per cent. Assuming a similar increase for the present decade, Texas ought to have a population of 3,138,674 in the year 1900. The valuations for 1897 amount to $850,309,246, but do not show a proportionate increase, in consequence of the general depression in values common to the whole country during the last five years. The taxable values have increased from $156.74 per capita in 1850 to $270.59 per capita in 1897, and the density of population has increased from $\frac{7.7}{100}$ inhabitants per square mile in 1850 to $8\frac{5}{100}$ per square mile in 1900.

The citizens of Texas are wide awake, energetic and progressive, and they know that in the strength of numbers, the aggregation of wealth, lies safety for the present and power for the future. They want the advantages of their State to be well known and wish every one to come and share them, and aid in building up and fulfilling the destiny of the richest and strongest State in the Union.

THE TEXAS & PACIFIC RAILWAY.

IT may not be generally known, but it is nevertheless the fact, that the idea of building a railroad across the continent to the Pacific was originally conceived in reference to the route adopted for the present Texas & Pacific Railway, as early as 1852, when the Legislature of Texas granted the first charter. But so doubtful were capitalists as to the practicability of the enterprise, and of its commercial value, that 8 years after the grant, less than 25 miles of the road had been completed within the State of Texas. The fact was that the original projectors of this enterprise were a decade in advance of the times. Of course, nothing was done during the Civil War, but interest was re-awakened in 1871, when Congress granted the present company's charter, providing for a railroad extending from Eastern Texas to the Pacific Ocean.

While all the hopes and plans of the original projectors have not been fully realized, there nevertheless exists the great Southern thoroughfare between the Atlantic and Pacific Oceans, and the Texas & Pacific Railway, as now constructed, constitutes 1,506 miles thereof, 1,138 of which are within the borders of Texas, and 368 miles of which are in Louisiana. With the eastern termini at Texarkana and New Orleans, the Texas & Pacific Railway runs in a westerly direction, through the northern part of Texas, to El Paso, connecting at that point with the Southern Pacific Railway to the Pacific Coast, and with the Mexican Central Railway to Mexico. This, the main line, via Marshall and Dallas, has a length of 869 miles; the Trans-Continental Division, from Texarkana to Fort Worth, via Sherman, has a length of 259 miles, and the New Orleans Division, extending from New Orleans, La., to Marshall, Texas, has a length of 368 miles. With its connections, it forms one of the most important routes of traffic between the Gulf States and the upper Mississippi Valley, between the Gulf and the great Northwest, between the Atlantic Coast and the Pacific Coast, and between Mexico and the entire North and Northeast. Crossing two great States from east to west, it connects with every important railway line in Texas and Louisiana, and all points in Texas, Mexico, New Mexico, Indian Territory, and Louisiana, can be reached by way of the Texas & Pacific

Railway. In Texas, the railway traverses 32 counties, but the greater part of its traffic may be said to come from a strip of country about 100 miles wide, extending from Texarkana to El Paso. Within this strip are 74 counties, having a population of about 1,000,000. There are 897 cities, towns, villages and postoffices within the territory mentioned, and among these are some of the most important commercial and manufacturing cities in the State. In this area are

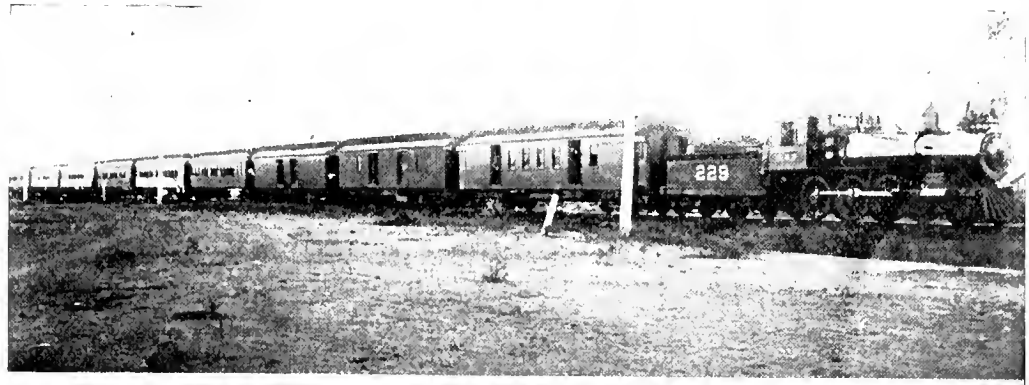
RIO GRANDE DIVISION TEXAS & PACIFIC RAILWAY

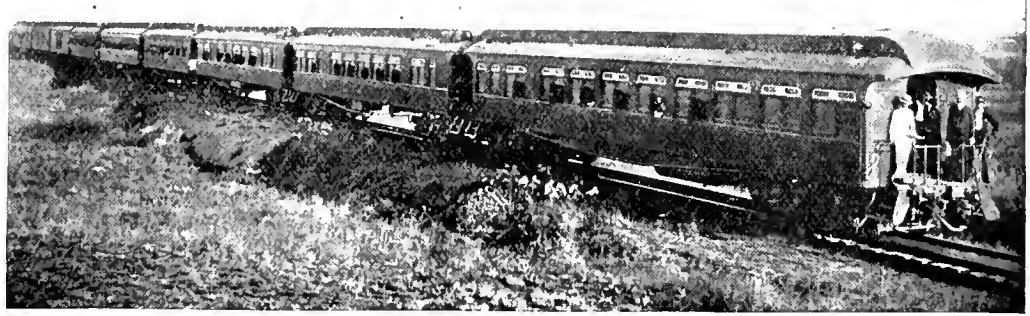
CHAIR CAR 487.

the cities of Texarkana, Jefferson, Atlanta, Marshall, Longview, Mineola, Terrell, Dallas, Fort Worth, Clarksville, Bonham, Sherman, Denison, Denton, Pilot Point, Weatherford, Thurber, Baird, Cisco, Abilene, Sweetwater, Colorado, Big Springs, Midland, Pecos and El Paso, on the line of the Texas & Pacific Railway, and Greenville, Commerce, Sulphur Springs, Mount Pleasant, Gilmer, Tyler, Athens, Corsicana, Hillsboro, Mount Vernon, Troupe,

Overton, Henderson, McKinney, Waxahachie, Decatur, and others on connecting lines, within 40 miles of the Texas & Pacific Railway. Forty per cent of the whole population of the State has its home here, and the density of population is $11\frac{4}{10}$ to the square mile, while in the State at large it is a little over 8 persons to the square mile. About $41\frac{3}{10}$ per cent of the entire acreage under cultivation in the State is located along the line of the Texas & Pacific Railway, and while this section of the State is more densely settled than any other, there is nevertheless room for many thousand newcomers.

The different zones of resource peculiar to the country traversed by the Texas & Pacific Railway are perhaps best shown by an imaginary trip over the line. From New Orleans, a few feet above sea-level, west for many miles, are thousands of acres devoted to the cultivation of sugar cane and rice. Further northwest, skirting the south bank of Red River, is a large area, planted annually in cotton, corn and sugar cane. Approaching the Texas border and extending into the State 100 miles or more, are great forests of yellow pine, cypress, white oak, ash, sweet gum, and other valuable woods, interspersed at intervals with flourishing towns, lumber camps, and well-kept orchards and farms. The annual lumber product





is valued at about $7,000,000. In the same region are found extensive deposits of iron re, and brick, fire and potters' clays. Early fruits are grown extensively and exported fresh to the Northern markets. The standard field crops of the country are corn, oats and cotton. While pasturage for cattle is not very abundant, the forests afford mast in almost unlimited quantity, and hogs are produced in great numbers.

From the edge of the timber, say from Edgewood Station, in Van Zandt County, westward to the Brazos River, a distance of about 140 miles, are the famous black waxy prairies of Northern Texas, and o the Trans-Continental Division of the Texas & Pacific Railway, the rich, loamy Red River lands. This sectio of the State is densely settled, and produces vast quantities of cotton, corn, wheat, oats, rye, millet, sorghum and vegetables. The counties fronting on Red River are also famous for their fine fruits. Stock raising, in connectio with general farming, is carried on extensively, and the finest grades of horses, mules, cattle and hogs in the State wi be found on the farms in this region. The altitude of this section is from 400 to 800 feet above sea-level.

Between the Colorado and Brazos Rivers, a distance of 175 miles, lies a stretch of fertile country, part smooth, open prairie, part rugged timber land, which is admirably adapted to the profitable raising of livestock of all descriptions, and yet produces magnificent crops of cereals, as well as cotton and corn. In quality, weight and quantity per acre, the cereals grown in this part of the State seem to excel those of other States. The altitude above sea-level is from 1,000 to 2,000 feet. The annual rainfall is not so abundant or as regular as further east, but fairly good crops are made year after year. Land is cheap, and while there is much good farm land, there is much more better suited for pasturage. Great forage crops are annually grown, and these, used in connection with the very abundant natural pasturage, make it possible to produce great numbers of cattle, horses and sheep at very small cost. Wool, hides, beef cattle, mutton sheep, wheat, oats, corn, and cotton, are the principal sources of income. Compared with Eastern and Northern Texas, the region is thinly settled. In several of the counties of this region exist great deposits of coal, and several very extensive mines are profitably worked.

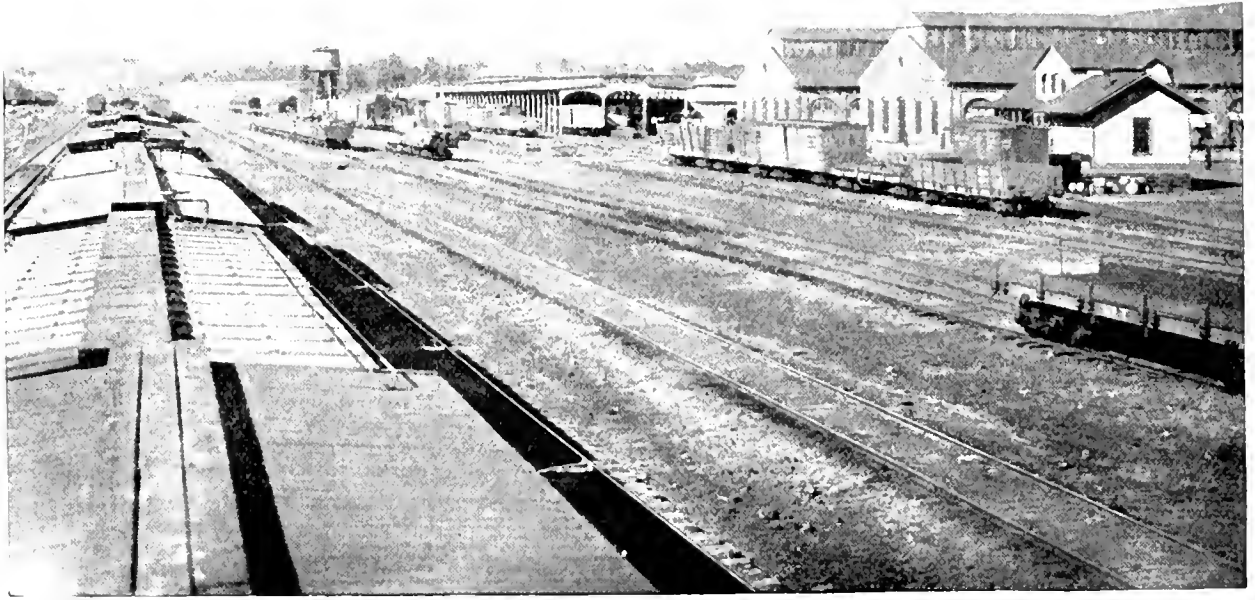
From the Colorado to the Pecos River extend vast open plains, affording most excellent pasturage, and having a mild and equable climate. The distance between the two rivers is 170 miles, and the altitude varies from 2,000 to 3,000 feet, the changes in level being abrupt and rising westwardly in a series of table-lands. More or less farming for forage is carried on for ranch uses, but the raising of live stock and the production of wool are the engrossing pursuits of the inhabitants. Great numbers of cattle and horses, and many million pounds of wool and hides, are annually exported. Most ranches have wells and windmills, and a few acres of irrigated land, on which are produced the finest of table fruits, such as fancy grapes, apples, peaches, pears, prunes, nectarines, etc.

The Trans-Pecos country lies west of the Rio Pecos and extends to the Rio Grande, a distance of 215 miles. It is a region of elevated table-lands, broken by numerous high mountain ranges. Most of these table-lands lie from

3,000 to 5,000 feet above sea level, the mountains being from 1,000 to 3,000 feet higher. The table-lands are covered with a luxuriant growth of grass, but are not adapted to general farming operations, owing to their great altitude and consequent dryness. The mountains are rich in minerals, particularly silver, copper, lead, iron and zinc, though indications of gold has been frequently found. Valuable ores abound in nearly all of these mountains, and in a small way are being developed. Immense deposits of sulphur ore exist in El Paso County, and some of them are being mined. In Reeves County is a great quarry of fine red sandstone, of which great quantities are exported. Marbles of various colors are known to abound in several of the mountain ranges, and indications of coal, asphalt and petroleum have been found in Reeves and Pecos Counties.

Agriculture, horticulture and truck-growing in this elevated region are confined to the immediate valleys of the Rio Grande, the Pecos River, Toyah Creek, Limpia Creek, numerous large springs and other sources of water supply, where the same can be applied for irrigation. Compared with the general area of the country, the acreage devoted to farming by irrigation is limited, but the results obtained are marvelous as to quality and quantity of yield. The finest and most productive orchards in the Southwest are found in this part of Texas and New Mexico, and the export of fine table fruits and commercial truck has grown into a business of great magnitude. The sugar beet yields exceptionally well as to quantity per acre, and the content of sugar is said to be higher here than anywhere else in the United States. All the staple crops common to the country are also produced by irrigation, and generally a better quality and a larger yield is secured. This mountain region is a favorite resort for people suffering from pulmonary troubles, the dry atmosphere and almost total absence of other diseases being highly beneficial.

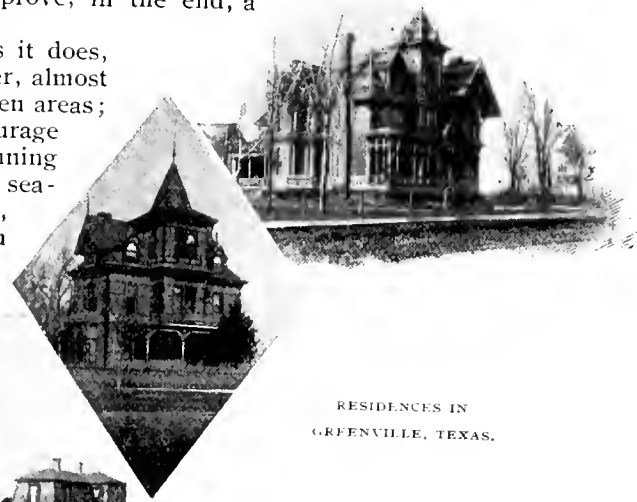
CELERY FARM, PECOS VALLEY.



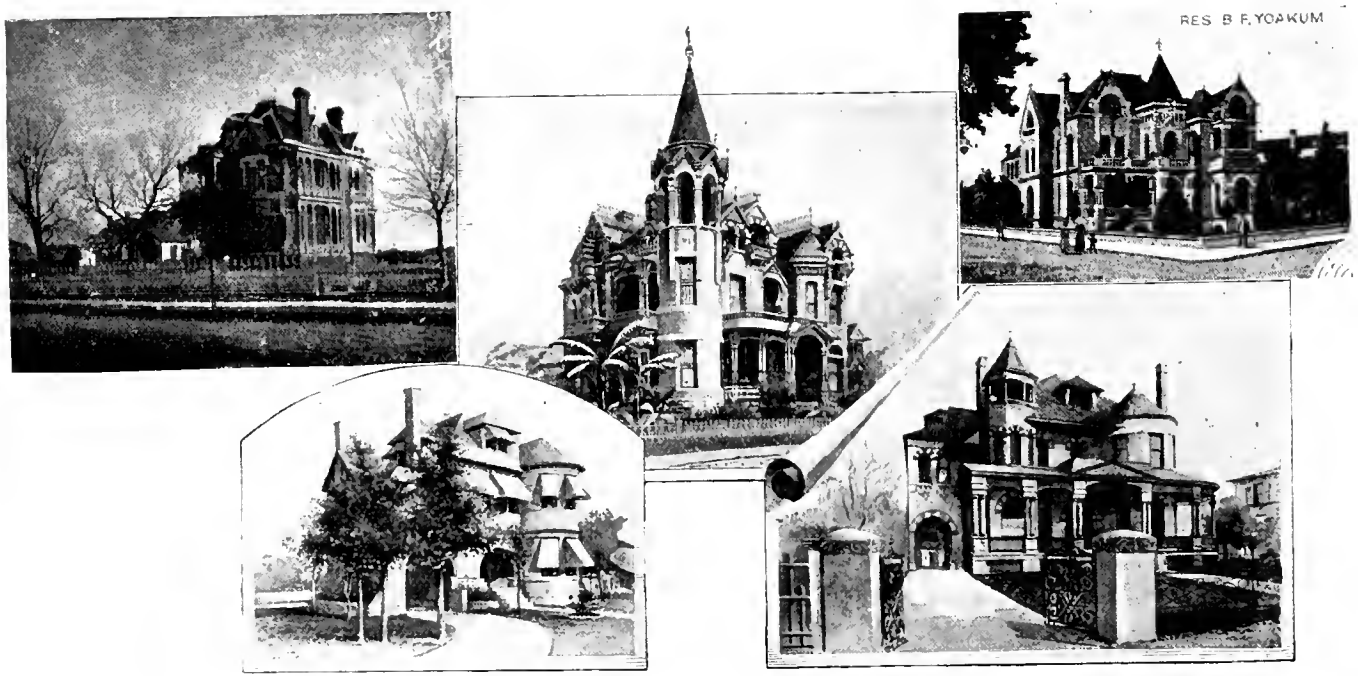
Where to Look for a Home in Texas.

LET the newcomer in Texas confine his search for a suitable location to that section of the State in which his prospective business has the best prospects of success. The necessary information can be had on inquiry, and it is almost impossible for anyone to fail to find a location to his suiting, if he comes with any well-defined ideas as to what line of business he proposes to engage in. To attempt to travel over, see and examine the whole of Texas, will cost him almost as much as a 320-acre farm, or the price of a stock of goods, and will prove, in the end, a useless expenditure of time and money.

Texas is so vast in area, so varied in resources, possessing, as it does, lands adapted to all possible uses, great forests of marketable timber, almost endless prairies, covered with nutritious grasses; level, rolling and broken areas; lands rich and fertile, like the prairies of Illinois; others fit for pasturage only; lands well watered by an abundant rainfall and numerous running streams; others arid in character; mountains 6,000 to 7,000 feet above sea-level, full of minerals; low, semi-tropical lands, producing sugar-cane, rice and semi-tropical fruits; others with the climate of Southern Missouri, producing small grain, corn and cotton; other lands adapted to the raising of live stock; some tillable by irrigation only; part in latitude 36°, part in latitude 26°, 700 miles further south; part of the country a few feet above sea-level, part 6,000 feet higher; in one part the red, ferruginous soils, common to Eastern Missouri, in other parts the deep, black loams of Illinois, Iowa and Nebraska; again, in other parts, the heavy, black, waxy soils peculiar to Texas; portions of the State densely populated,



RESIDENCES IN GREENVILLE, TEXAS.



GROUP OF TEXAS RESIDENCES FROM VARIOUS PARTS OF THE STATE.

others with settlements few and far between; that no earnest seeker after a location can fail to find a foothold, if he makes an intelligent search for it.

For the benefit of the intending settler, the following information concerning the country along the line of the Texas & Pacific Railway has been carefully prepared. The new comer in Texas will find upon examination an unlimited field for individual enterprise. The undeveloped resources of the State offer more inducements, advantages and prospects of ultimate success to those who establish themselves, than can be found in any other locality on the continent. To the manufacturer no better field is open. There is a demand, and the necessary raw material for furniture factories, wagon factories, cooperage and woodenware generally; for leather, saddlery and shoes; for iron works; for cotton and woolen factories; for dried and evaporated fruits, preserves, pickles; for creameries, cheese factories, condensed milk factories; for fruit and vegetable canneries; for meat packeries and for hundreds of other enterprises.

RESIDENCES IN WACO, TEXAS.

The farmer, stockman and wool grower can find soils, pasturage and water to his liking, and can have prairie or timber land, or both as he may desire. He can buy improved farms in the thickly settled parts of northern or central Texas, do mixed or stock-farming further west on more ground for less money, or raise his stock on the open range in the thinly settled counties west of the Colorado River. If he wants to raise fruit, or farm by irrigation, he can make his home in the Pecos Valley, the Rio Grande Valley, the Concho, and the valleys of many smaller streams in Western Texas.

BLAZING OUT THE WAY.

(COMMUNICATED.)

The men came on surveying
And reached the Texas line,
Where summer breezes swept the plains
With music half divine.

And there the people said to them,
"We know not why, nor how,
But this we know, these valleys rich,
Will never do to plow."

And thus the people argued,
In manner weird and strange,
About these fertile valleys, fit
For naught but cattle range.

That they were good for grazing
Was plainly to be seen,
If you would take for evidence
The grasses soft and green,

Where many thousand cattle fed,
Contented on the plains,
Where "Madame Rumor" had it, that
"It never, never rains!"

And thus the railroad men replied,
"A desert, do you say?"
But while they spoke, they onward marched,
Still blazing out the way.

"We're fond of deserts, such as this
That now before us lies,
With singing birds and rippling streams,
And cloudless summer skies.

"And here we think we can explain,
Can tell the 'why and how,'
Just now the cattle man is king,
And fears the farmers' plow.

"So he sends forth these rumors wild,
About the fearful drouth,
That he in quiet may remain
King of this Sunny South."

And as they onward pushed their work,
The people all would say,
That money put in railroads here
Was simply thrown away.

But still these men pushed forward
Across this sunny land,
And built the grand old T. and P.
Out to the Rio Grande.

Then farmers came upon the scene
And settled down to stay,
And grew vast crops of cotton, corn,
And wheat, and oats, and hay.

Then towns sprang up along the line
And into cities grew,
And everything was "push" and vim
Within this country new.

And much from forest and from mine
Was added to our wealth,
And invalids from Northern climes
Were soon restored to health.

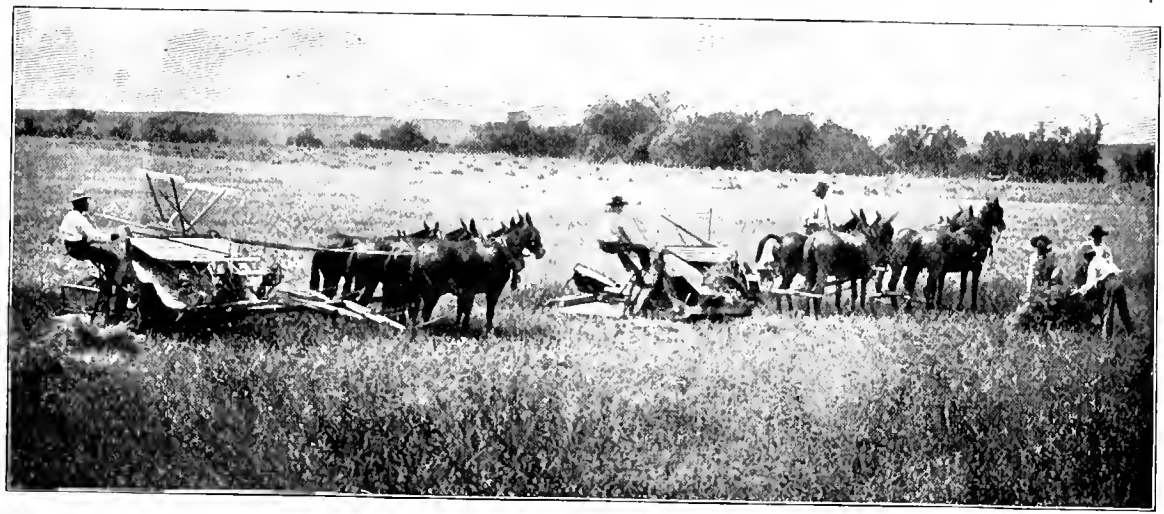
Then other roads looked on and saw
The products of the State,
And said, "we, too, will enter now,
Before it is too late."

And thus they came upon the scene,
Plunged forth into the fray;
But still the grand old T. and P.
Is blazing out the way.

J. P. B.

NORTHERN TEXAS.

THE WOODLAND COUNTIES. The line of separation between the timber lands and the black prairie lands is very marked, and may be described as commencing near the west bonndary of Bowie County, in the northeast corner of the State, thence running westerly along the Sulphur Fork of Red River to the east corner of Delta County, thence diagonally through Hopkins and Rains Counties southwest to about the center of the north line of Van Zandt County, thence south through Henderson County to the Trinity



HARVEST SCENE IN NORTHERN TEXAS.

River. This line would practically form the northwestern limit of the great timber belt, which extends southward to within 30 miles of the Gulf Coast, and extends eastward to the Sabine River, where it nnites with the great timber region of Louisiana.

Within 40 miles of the Texas & Pacific Railway are 20 counties, originally covered with timber, and of these, Bowie, Cass, Marion, Harrison, Gregg, Upshur, Wood and Van Zandt Counties are traversed by the Railway. Together with the other counties in the same region, they have many features in common. A general description of their salient features is applicable to all of them, and will save

FARM SCENE IN BOWIE COUNTY.

much tedious repetition. The general surface of these counties is undulating, level in some places and hilly in others. The soils generally are ferruginous clays on the uplands, gray sandy loams on level areas, with dark loams, sometimes stiff black soils on the lower creek and river bottoms. The country is exceptionally well watered, having an annual rainfall of 40 to 45 inches, well distributed. Springs of large capacity are very numerous, and pure freestone water is obtained in wells of very moderate depth in all the counties. In Harrison and several other counties artesian wells are numerous. The flowing waters of the timber regions are the Sabine, Trinity, Neches, Sulphur Fork and Angelina Rivers, all of which are occasionally navigable for small steam craft. Their tributaries are very numerous, and usually carry water all year round. Many of them afford good water power for manufacturing purposes.

Originally fully eight-tenths of the whole area was covered with dense forests of exceptionally large and valuable timber. Much of it still remains, though the lumber industry in this section has assumed very large proportions. The prevailing trees are long and short leaf pine; but post oak, cypress, white, red and black oak, hackberry, slippery and red elm, hickory, black and sweet gum, magnolia, sugar and swamp maple, and other deciduous trees are common to the whole region. Some forty miles south of the Texas & Pacific Railway are immense forests of long leaf pine, which, though they have been penetrated by several railways, still yield large quantities of lumber.

The prevailing rock is a variety of sand stone, available for foundations to buildings, but is rarely uniform in color, nor is it found in any large quantity. More or less iron ore is found in all the counties, but is very abundant in Cass, Harrison, Marion, Bowie, Rusk, Upshur, Titus, Morris, Camp and Smith Counties. Careful estimates made from actual surveys show an ore bearing area of nearly 1,000 square miles. Iron furnaces have been erected at Rusk, Jefferson, New Birmingham, all convenient to an abundance of timber for charcoal. Beds of lignite have been found in many places, and at a later day will be put to practical use. Under ordinary conditions the

FARM SCENE IN CASS COUNTY.

crops grown in the timber country average 300 to 400 pounds of ginned cotton to the acre, 20 bushels of corn, 10 to 12 bushels of wheat, 30 to 50 of oats, 15 to 20 of rye, 250 gallons of molasses, 150 gallons of sorghum syrup, and from 150 to 250 bushels of sweet potatoes. Fruits are grown extensively, and peaches, pears, plums and grapes are produced in such quantity as to maintain a number of canning factories. A large and profitable business in the export of early strawberries, blackberries, early fruits and vegetables to Northern markets, has grown up within the past decade, and is steadily growing in magnitude.

A NEW HOME IN THE TIMBER.

The natural pasturage, while neither ample nor as good as that in other sections of the State, is still sufficient to reduce the cost of raising live stock, as compared with stock-raising in the Northern States. Bermuda grass is much grown for pasturage, and is much esteemed. A wild Japan clover has been gradually spreading over the country, and where it grows thickly, it forms a very valuable forage. The cattle raised are principally the ordinary farm dairy stock, comparatively few being raised especially for the butchers' block, except to supply the local demand for beef. Hogs are raised in great numbers, and at very small cost, as the mast in the forests affords an abundance of cheap and fattening food. Before going into a more detailed description of the several counties mentioned above, it might be of interest to the reader to know when he could to best advantage remove to Texas.

So far as considerations of health are concerned, a Northern farmer could go at any time of the year, without assuming any risks. All of east Texas is healthy country, having but few local causes for disease. While it is an exceptionally well-watered country, it also has excellent natural drainage, being hilly rather than smooth. Its general altitude is from 400 to 600 feet above sea-level. It is well sheltered from the cold north winds, and the temperature seldom gets as low as zero in winter. The summer temperature, in July, sometimes reaches 100° in the shade, but owing to the Gulf breezes, that set in after sunset, the nights are generally cool enough to afford refreshing sleep. Those living on the river and creek bottoms, on new land, sometimes have mild attacks of fever and ague, but these yield readily to treatment.

The month of October is considered the best time to go to Eastern Texas, but any time, from the first of September to the first of March, will do for the emigrant. Going at such a season, the emigrant will have time to look about and locate himself advantageously, to buy or rent land, and in case of purchase, to clear and fence his land, build his house, break his land, and be in readiness to plant in time to make a crop. Arrangements for renting land are usually made in December, and renters generally take possession of their land by or before Christmas; but lands can often be rented as late as April.

APPLE ORCHARD, NORTHERN TEXAS.

Emigrants from the Northern States should not forget that they are going South, and that the climate and the seasons for sowing and harvesting are much earlier than they have been accustomed to, and that therefore they should start as early as possible after October 1st.

The timber region of Eastern Texas has its advantages, as well as its drawbacks. Undoubtedly, the prairie country is the more beautiful and attractive, but the timber region has the more equable climate, the more abundant and better distributed rainfall, and the milder winter. Lumber and fencing material, a very important consideration in the prairie region, are very cheap here, and if cash is scarce, can be gotten by the new settler by a liberal use of his axe, on his own ground. While clearing his land for cultivation, he obtains not only material for his house and other buildings, but he cuts the timber out of which he splits his rails and fences his land. In addition to this, he has a permanent supply of fuel, and if near a railroad, can also find a market for wood and ties. This wood standing on the farm, if properly handled and utilized, should be worth to the new settler, in houses, fences, outbuildings, fuel and sales, from $300 to $500, all of which he would have to expend for similar structures in a prairie country. Lands are very cheap in the timber region, and the man with limited means, but plenty of energy and thrift, as well as good judgment, will hardly fail in making a new home.

THRESHING WHEAT IN TEXAS.

BOWIE COUNTY, TEXAS. The area of this county is 915 square miles, or 585,600 acres. Of this, about 50,000 acres are in cultivation, though about 75 per cent of the surface of the county is good for farming, when denuded of its timber. The remainder affords fairly good pasturage about 8 months in the year. The annual crops produced amount to about 7,000 bales of cotton, 300,000 bushels of corn, 20,000 bushels of oats, 35,000 bushels of sweet potatoes, 1,000 tons of hay, and other crops in quantity sufficient to produce a value of $500,000. About 1,500 acres are devoted to the cultivation of vegetables and fruits, the value of which is estimated at about $25,000. The soils, in character and quality, and the yield per acre, are about the same as in the other woodland counties. Fruits of all descriptions find here a congenial climate, and are rarely injured by late frosts. In some localities, where there is much iron in the soil, the flowers are rich in color and the fruits have a fine, delicate, rich flavor, not found in fruits growing on other soils.

The average temperature of the county, in summer, is 86°, and in winter, 40°. Public health, as a rule, is good. Malarial attacks, of a mild and easily controlled type, occur in a few localities. Red River and the Sulphur Fork of the same stream, with their numerous tributaries, perform the drainage of the county, and are fed by numerous springs. Water for the farm and household uses is obtained from springs and from wells, which can be had almost anywhere in the county, at a depth of 20 to 30 feet.

Mineral waters of unquestioned value in the cure of dyspepsia, rheumatism, kidney troubles, and other ailments, are found at Dalby Springs, Ingersoll Springs, Chalybeate and Red Springs, all of which are noted local health resorts.

A very large lumber industry is carried on, there being some 25 or more saw-mills, some 10 shingle mills, fruit box factories and furniture factories in the county. Most of the railways of the arid regions, in New Mexico, Arizona and old Mexico, obtain their heavy lumber and railway ties from this locality. A great export of oak ties, for Northern railways, is also carried on. The manufacture of lumber forms the most important industry in the county.

The assessed values of the county, for 1897, are given at $4,177,910, of which $936,930 is charged to railway property, $221,481 to live stock, and the remainder to other property belonging to individuals. The population, in 1890, was 20,267. Presuming an increase similar to that of the preceding decade to have taken place, the county ought to have now about 30,000 inhabitants. The average taxable value of land in the county is $2.49 per acre, and the rate of county taxation, 60 cents for each $100 valuation. On the 1,366 farms in the county, there were, in 1897, 3,875 horses and mules, 6,297 head of cattle, 21 jacks and jennets, 1,271 head of sheep, 338 head of goats, and 6,637 head of hogs.

SCENE IN BOWIE COUNTY

THE CITY OF TEXARKANA. This is the most important town in the county, forming the Eastern gateway into the State. It is situated in both Texas and Arkansas, and is a wide-awake incorporated dual city of 14,000 inhabitants, being governed by two separate municipal organizations. The population is about evenly divided between the two parts of the city. Texarkana is the Southern terminus of the St. Louis, Iron Mountain & Southern Railway, and the Eastern terminus of the Texas & Pacific Railway, both of the main line, and of its Trans-Continental Division. It is also the point of entry into Texas of the St. Louis Southwestern Railway, and the Kansas City, Pittsburg & Gulf Railway. It is a well-built little city, with all modern conveniences common to much larger and older communities. Among its institutions are a large and attractive Union Depot, a water-works system, an electric light plant, telephone lines, gas works, some 5 miles

UNION STATION, TEXARKANA.

RESIDENCES
IN TEXARKANA.

of street car lines, 4 daily and weekly newspapers, an ice factory, a cotton compress and cotton seed oil mill of large capacity. There are 2 fire companies and an electric alarm system, as well as an extensive system of underground sewers. The several railways also have their shops and roundhouses here, and employ a large number of men. Each part of the city has a handsome 2-story brick school building. The hotel accommodations are good. All lines of business are well represented, but the predominant interest is the manufacture of lumber, shingles, furniture, and other goods made from wood. Potters' clay is abundant within the city limits, and a large pottery situated there does a good business.

New Boston, 22 miles west of Texarkana, is the county seat. De Kalb, a trading point, 12 miles west of New Boston, exports about 7,000 bales of cotton annually, and does a large business in railroad ties. It has about 700 inhabitants. Dalby Springs and Red Water are well-known local health resorts, easily reached by stage lines and having hotel accommodations for visitors.

* * * * * *

CASS COUNTY, TEXAS. This county has much in common with its northern neighbor, the county of Bowie, from which it is separated by the Sulphur Fork of Red River. The general surface is undulating, but quite hilly in a few places. About three-fourths of the area, 951 square miles, is covered with short-leaf pine and other timber common to this region. It is well drained by numerous streams, which carry water all the year round. Good freestone water, for household use, can be had in wells anywhere in the county, and large springs are numerous. The annual rainfall is about 45 inches, and well distributed.

The county was created in 1846, and was formerly part of Bowie County, and its population, in 1890, was 22,554. Nearly the whole population is interested in agricultural pursuits, or in the manufacture of lumber. The Texas & Pacific Railway, the St. Louis Southwestern Railway, and the Sherman, Shreveport & Southern Railway, traverse the county and afford ample railway facilities. The assessed values of taxable property, in 1897, amounted to $2,014,770, of which $957,384 was assessed against lands, $143,880 against town property, $207,073 against live stock, and $240,465 against railways. The county maintains 84 school buildings and employs 209 teachers, the school population being 4,685. Improved lands sell at prices ranging from $5 per acre up to $20 per acre, according to the location and improvements made thereon.

The soils respond readily to cultivation. The annual crop in the county is valued at about $600,000, and is grown on 1,862 farms, comprising 73,421 acres. Some 10,000 bales of cotton and 300,000 bushels of corn form the greater part of the yield. The orchard and garden products yield annually a money value of about $65,000, soils and climate being admirably adapted to the

VIEWS IN TEXARKANA.

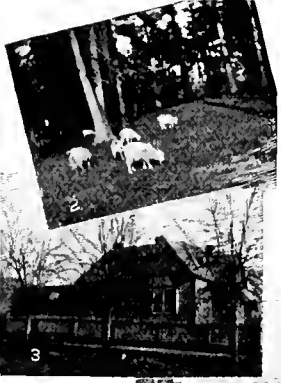
2. City Hall.
3. Court House.
4. Post Office.
5. Public Schools.

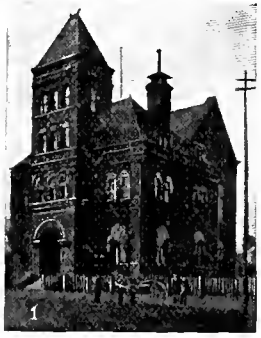
cultivation of fruits and commercial truck. The live stock interest is not so extensive as in other counties. Cattle and sheep need some feeding during the winter months, and cotton seed is generally used. Hogs do moderately well on the mast in the forests, and are fed only to keep them gentle. The live stock of the county, in 1897, consisted of 5,691 horses and mules, valued at $144,850; 8,567 head of cattle, valued at $47,578; 25 jacks and jennets, valued at $1,840; 1,129 sheep, valued at $1,082, and 11,187 hogs, valued at $11,723.

There are, in the county, quite a number of towns, none of them large, but each transacting business of considerable volume. They are: Linden, county seat, 500 inhabitants; Queen City, 700; Cusseta, 200; Kildare, 400; Douglasville, 400; Atlanta, 2,000; Avinger, 200; Bryan's Mills, 150; Bivens, 350; Woodworthy Mill, 300, and Hughes' Spring, a well-known summer resort, noted for the curative powers of its waters, in cases of general debility, malarial and typhoid fevers, with 400 inhabitants. Local sportsmen find more or less game, such as deer, turkey and quail, in the forests, and during the winter months, ducks and geese are found in great numbers along the streams. Perch, catfish, bass and buffalo afford good fishing in most of the streams.

PLOWING IN JANUARY, MARION COUNTY.

MARION COUNTY, TEXAS. This county has about 15,000 inhabitants, of whom about 5,000 are residents of the city of Jefferson, the county seat. The county was created from Harrison County, in 1860, and has an area of 418 square miles. It lies on the Louisiana State line, between Morris and Cass Counties, and Harrison County. Jefferson is at the head of navigation, on Big Cypress Bayou, a confluent of Red River, and before the days of extensive railway construction, was one of the most important inland shipping points in Texas. At the present time, it is a good commercial point, and has all modern conveniences for good living and the transaction of business. The more important local institutions consist of a large cotton compress, iron works, a flour mill, a foundry, an ice factory, several very extensive saw-mills, gas works, fire department, a federal court house, 7 churches, good hotels, high grade schools, and a number of wholesale commercial houses. Lumber, woolen goods, iron,





cotton and hides, form the principal articles of export. The principal industry in the county is the manufacture of lumber, there being 10 saw-mills and 2 shingle mills in thecounty. At Kelleyville is an iron furnace, using the native ore, which has turned out pig iron, plows, stoves and hollow-ware for many years. Kelleyville has about 400 inhabitants. Lasater and Lodi are trading points in the county, having about 250 inhabitants each.

The county is very well watered, having several large lakes and numerous running streams, a few of which are navigable. Good water is obtainable anywhere, in wells, and the annual rainfall is about 48 inches. Nearly the whole surface of the county is arable and could be cultivated with reasonable profit, but much of the land is chiefly valuable for its timber. The surface is gently undulating, being broken in a few places by steep hills. The soils, climate, timber and yield of product per acre are about the same as in the adjoining counties. The general annual yield of crops is valued at about $250,000, to which should be added $30,000 for fruits and commercial truck, which yield abundantly.

Stock raising is carried on as part of ordinary agricultural operations. The native pasturage is scant, as compared with other counties, but large areas are planted in Bermuda grass, which affords excellent pasturage. Good winter range is obtained from the thickets of switch cane, growing in some of the lowlands. The live stock rendered for taxation, in 1897, amounted to 2,030 head of horses and mules, value, $46,231; 3,135 head of cattle, value, $28,522; 3,286 head of hogs, value, $3,609; miscellaneous, value, $339; total, $78,701. There are about 500 farms in the county, comprising about 25,000 acres.

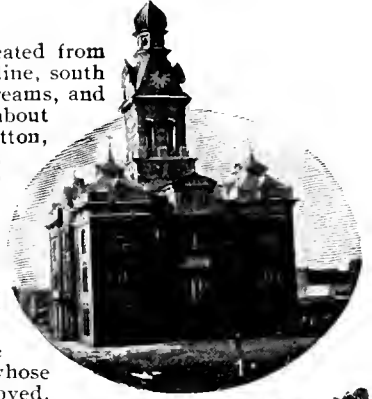
The Texas & Pacific Railway, and the Sherman, Shreveport & Southern Railway, traverse the county and have a mileage of $29\frac{61}{100}$ miles. The school population numbers 4,037, for whose education 57 school houses and 80 teachers are maintained. Improved lands sell at $5 to $10 per acre; unimproved lands can generally be had at $2 to $5 per acre. The assessed values of all property in the county, in 1897, amounted to $1,258,431, of which $548,402 was assessed against lands and town property, $78,701 against live stock, and $196,330 against railroads.

Bangus Springs is a noted local health resort, the waters being credited with virtues of great value.

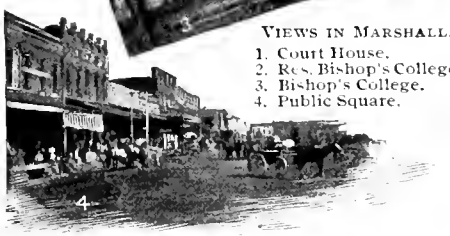
VIEWS IN JEFFERSON.

1. U. S. Government Building.
2. Sheep Raising.
3. Residence B. F. Shevell.
4. Iron Works.
5. Residence M. C. Sluter.
6. Near Jefferson.
7. Lumber Mills.

HARRISON COUNTY, TEXAS. This is one of the oldest counties in northeast Texas. It was created from Shelby County in 1839, and has an area of 899 square miles. It is situated on the Louisiana State line, south of Marion County. The surface generally is high rolling country, traversed by numerous running streams, and where not in cultivation, is covered with heavy timber common to this part of the State. There are about 1,700 farms in the county, yielding annually a value of $850,000, consisting of about 15,000 bales of cotton, 372,000 bushels of corn, 7,000 bushels of oats, 80,000 bushels of sweet potatoes, 10,000 bushels of peas and beans, 400 barrels of sugar, 850 barrels of sorghum molasses, 8,000 tons of cotton seed, and 2,500 bushels of peanuts. Rice grows well, but little of it is planted. About 2,000 acres are devoted to the cultivation of fruits and vegetables and yield annually a money return of about $40,000. As in all the counties of this region, vegetables and fruits grow in profusion. They are grown in considerable quantities for export and some lines of vegetables are produced twice the same year. Irish potatoes are ready for market about April 20th, sweet corn by June 20th, and watermelons about the first of July. Wheat usually matures about the first of May.



The population in 1890 was 26,721 and has greatly increased since then. The school census gives 7,487 children of scholastic age, for whose education 107 school houses are maintained and 119 teachers are employed. The taxable values for 1897 amounted to $4,051,255, of which $2,741,565 were assessed against railways, $2,320,820 against lands and town property, and $274,427 against live stock. There are 77.57 miles of railway in the county, the same belonging to the Texas & Pacific, the Texas & Sabine Valley, and the Marshall, Paris & Northwestern Railways. The live stock of the county consists of 6,835 head of horses and mules, 13,199 head of cattle, 878 head of sheep and goats, and 7,882 hogs, which are kept on the farms. Improved lands can generally be had at prices ranging from $5 to $25 per acre; unimproved lands varying from $3 to $10 per acre. Good water is obtainable everywhere, and iron ore of superior quality is very abundant.



VIEWS IN MARSHALL.
1. Court House.
2. Res. Bishop's College.
3. Bishop's College.
4. Public Square.

THE CITY OF MARSHALL. This city lies 74 miles southwest of Texarkana and 40 miles west of Shreveport, La. It is a very attractive, growing little city of 8,000 inhabitants, and a pleasant winter resort. It has all the conveniences common to much larger places, and among its institutions are an electric light plant, a good system of water works, a well equipped fire department, a handsome new court house, an opera house, telephone service, two national banks, a cotton gin factory, the general shops and roundhouses of the Texas & Pacific Railway, several saw and planing mills, a car wheel foundry working the native iron ore, and an ice factory. There are several very good hotels and two daily and two weekly newspapers. The residence portion

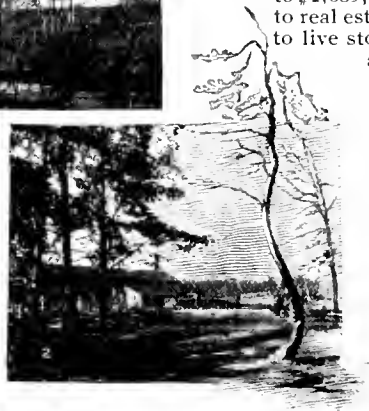
contains many attractive buildings, and the various congregations have handsome places of worship. The public school system of the city is conducted according to modern methods, and as maintained, is creditable to any city.

SCENE IN UPSHUR COUNTY

FARM SCENE NEAR MARSHALL.

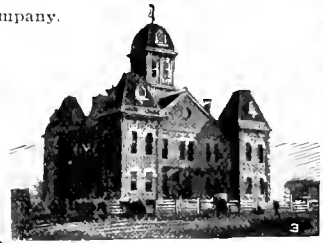
The New Orleans Branch of the Texas & Pacific Railway, joins the main line at Marshall, affording quick and easy transportation to the Gulf and the Southeast.

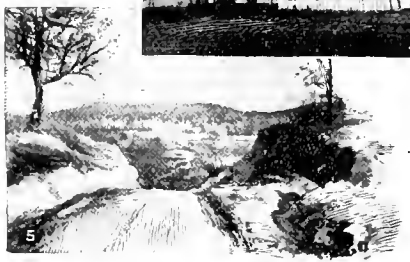
Mineral springs are numerous in the county, the most noted being Rosborough Springs, 8 miles south of Marshall, Hynson Springs, 6 miles west, and Montvale Springs, 12 miles northwest. All of them are recommended for the treatment of dyspepsia, liver and kidney troubles.



VIEWS IN GILMER.

1 and 2. Commercial Lumber Company.
3. Court House.
4. Commercial Hotel.
5. Scene near Gilmer





UPSHUR COUNTY, TEXAS. The area of this county is 519 square miles, and the population numbers about 15,000. The assessed valuations in 1897 amounted to $1,689,542, of which $892,235 were chargeable to real estate, $383,870 to railways, and $177,737 to live stock. The county was created in 1845 and named in honor of Abel P. Upshur, Secretary of State under President Tyler in 1843. It is the third county west of the Louisiana State line, on the Texas & Pacific Railway, and the fourth county south of Red River. The St. Louis Southwestern Railway crosses it from north to south, and the Texas & Pacific Railway from east to west. The Sabine River forms the southern boundary.

The principal occupations of the inhabitants are farming and the manufacture of lumber. The farms, of which there are about 1,200, are small, as is usual in a wooded country. About 50,000 acres are in cultivation, producing annually from 7,000 to 8,000 bales of cotton, 300,000 to 400,000 bushels of corn, about 30,000 bushels of rye, oats and wheat, 30,000 bushels of sweet potatoes, 1,000 bushels of Irish potatoes, 1,000 bushels of peas and beans, 500 barrels of sugar, and about 4,000 tons of cotton seed. The money value of the crop, including orchards and gardens, will approximate annually, $550,000.

Much of the timber in the county is very large and valuable, and lumber, railroad-ties, shingles, etc., are exported in large quantity. The short leaf pine (pinus mitis) is still very abundant, and the timber, still standing, will supply the local mills for a number of years to come.

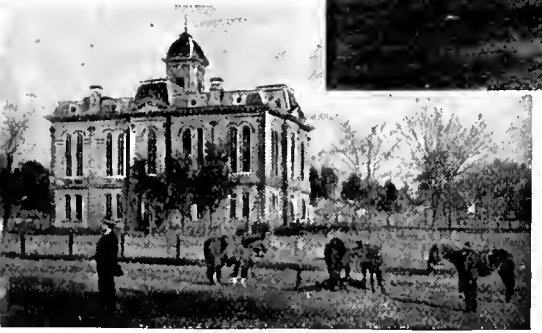
The general climatic conditions, soil, etc., are very similar to those of the adjoining counties, and the yield, per acre, is about the same. The native grasses are neither abundant in variety or quantity, and the county is not adapted to stock raising on a large scale. The live stock in 1897, consisted of 3,004 horses and mules, valued at $115,645; 8,527 head of cattle, valued at $47,078; 47 jacks and jennets, valued at $2,890; 2,298 head of sheep and goats, valued at $1,293; and 10,511 hogs, valued at $10,821. Iron ore is abundant, and of superior quality.

Gilmer, the County Seat, a station on the St. Louis Southwestern, has about 1,500 inhabitants. It has some 17 mercantile establishments, a private bank and 5 saw mills, the largest of which ships about 1,000 car loads of lumber per annum.

Big Sandy, in the southern part of the county, is the crossing point of the Texas & Pacific and the St. Louis Southwestern Railways. It has about 350 inhabitants.

Phillip's Spring, situated about 8 miles north of Gilmer, is chalybeate in character, and is much visited by seekers after health.

PRETTY HOMES, LONGVIEW, TEXAS.



COURT HOUSE, LONGVIEW.

GREGG COUNTY, TEXAS. Gregg County has about 10,000 inhabitants, of whom 4,000 are residents of Longview, the County Seat, and 500 at Kilgore, an important trading point. It was formed in 1873, and has an area of 279 square miles. About one-half the area is cleared, the remainder being covered with dense forests; the soil, climate, products per acre being about the same as in the neighboring woodland counties. The farm values produced annually amount to about $350,000, and ordinarily consist of 14,000 acres in cotton, 13,500 acres in corn, the two crops being worth about $250,000; 5,000 acres, more or less, are devoted to the cultivation of small grain, sweet and Irish potatoes, beans, peas, hay, sugar cane and sorghum. Some 1,600 acres are planted in fruits and vegetables, yielding a revenue of $57,000.

The County is well watered, having numerous running streams; fine springs exist in many localities, and good water is obtainable anywhere in wells. Improved lands bring from $5 to $12 per acre, there being about 750 farms in the county. Outside of agricultural pursuits, lumbering is the principal business of the people. Transportation facilities are very good. The Texas & Pacific Railway traverses the county from east to west; the International and Great Northern Railway has its northern terminus at Longview, from which point it extends south and southwest to Galveston and Laredo. The Texas and Sabine Valley Railway also has its terminus at Longview. The railway mileage in the county is $21\frac{18}{100}$ miles, valued at $154,205. The taxable valuations for 1897 are reported at $1,569,980, of which $974,780 is assessed against real estate; and $111,585 against live stock, the latter consisting of 2,412 head of horses and mules; 5,050 head of cattle; 500 head of sheep and goats, and 4,930 head of hogs.

Longview, the county seat, is a bustling town of 4,000 people, and an active manufacturing point. Among the local industries are a plow factory, a saw-mill, ice factory, bottling works, broom factory, mattress factory, electric light plant, a cotton compress, an oil mill, a foundry and machine shop, and the railway shops. The court house is a commodius and substantial structure. There are eight schools in the town, and a similar number of places of worship.

COTTON, CORN, OATS, NEAR LONGVIEW.

Kilgore, the next important town in the county, has 500 inhabitants, 5 church buildings, and several good schools.

Capp's Mineral Well, at Longview, has been highly recommended as a cure for dropsy, Bright's disease, dyspepsia, biliousness, rheumatism and kindred diseases. A qualitative analysis, made by Professor Richard, of the U. S. Department of Agriculture, shows it to be a sulphur water, containing sulphate of iron, potash, sulphate of soda, salts, and chlorides of lime and magnesia.

WOOD COUNTY, TEXAS. This is the most westerly of the counties along the line of the Texas & Pacific Railway, having extensive forests of pine timber. All of the county is heavily wooded, but the eastern half contains the great pineries, from which the supplies for the large number of saw-mills are drawn. In the western half, the forests partake more of the characteristics of the timber of the black land counties, further west. The general surface is more level than in the other woodland counties, though there is little material variation as to soils, climate, temperature, rainfall or yield of crops per acre. A larger part of the area, which comprises 702 square miles, can, however, be profitably cultivated. There are about 50,000

acres, in 1,400 farms, under cultivation, producing annually a value of about $600,000. The harvest generally consists of 10,000 to 11,000 bales of cotton, 400,000 bushels of corn, 50,000 bushels of oats, 30,000 bushels of sweet potatoes, 35,000 to 40,000 gallons of molasses, 6,000 tons of cotton seed, and orchard and garden products to the value of $35,000 to $40,000. As in all of the woodland counties, the raising of live stock is part of ordinary farming operations. The live stock in the county, in 1897, was valued at $220,301, and consisted of 5,744 horses and mules, 9,607 head of cattle, 1,211 head of sheep and goats, and 12,465 head of hogs.

COTTON FIELD SCENE.

The county was organized in 1850, and has 14,000 inhabitants, of whom 3,000 are residents of Mineola, the junction of the Texas & Pacific Railway, the International & Great Northern Railway, and the Missouri, Kansas & Texas Railway; 500 of Quitman, the county seat; 400 of Winnsboro, and 250 of Hawkins, smaller trading points in the county. The assessed values of taxable property, in 1897, amounted to $2,695,113, of which $1,619,538 was assessed against real estate, and $499,465 against railways, which have $49\frac{33}{100}$ miles of tracks in the county. The school census reports 3,870 children of school age, for whose education 61 school houses are maintained, and 69 teachers are employed.

The industrial pursuits run mainly in the manufacture of lumber, railroad ties, shingles, etc., there being about 17 saw-mills at work. The other enterprises, principally located at Mineola, consist of 81 mercantile establishments, 1 bank, 1 flour mill, 2 fire brick and tile factories, 1 cannery, 1 furniture factory, and the repair shops of the railways. Improved lands range in price from $5 to $25 per acre; unimproved, $2 to $10 per acre.

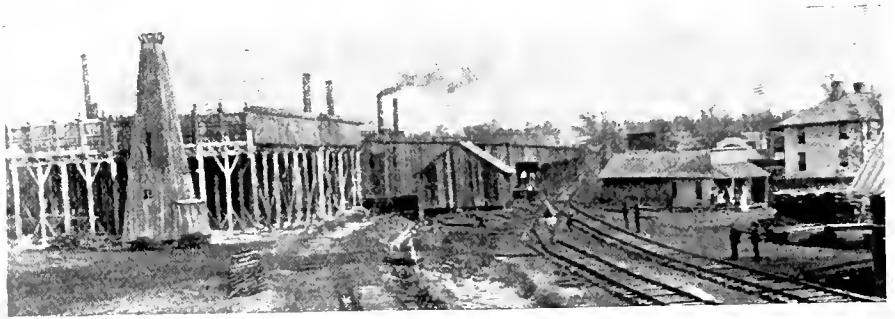
VAN ZANDT COUNTY, TEXAS. This county is on the western edge of the great forest region of Eastern Texas, and partakes of some of its characteristics. About two-thirds of the surface is woodland, with soils and timber common to the country lying east of it. Much of the timber is large enough and of such quality as to make it valuable for commercial purposes. The remaining third of the county is open prairie, generally large patches of heavy, black hog-wallow land, and black, waxy land, alternating with black,

sandy loams. There is considerable diversity in the soils; light, mellow alluvium being found along the streams, red lands in the eastern half of the county, and gray, loamy soils along the edge of the timber.

The county is well drained by the tributaries of the Sabine, Neches and Trinity Rivers, and most of the creeks carry water all the year round. Good water, for domestic uses, is obtained from wells, at a depth of 20 to 40 feet. On some of the prairies, cisterns are used, owing to an excess of lime in the water or soil. The prairie lands, where not in cultivation, afford excellent hay and pasturage. About nine-tenths of the surface of the county is good farming land. The ordinary yield of crops, one year with another, is one-fourth to two-thirds of a bale of cotton per acre, 25 to 30 bushels of corn, 10 to 15 bushels of wheat, 40 bushels of oats, 35 of barley, 90 to 100 of Irish potatoes, 200 of sweet potatoes, 250 to 300 gallons of sorghum syrup, and from 2 to 3 tons of millet hay. Vegetables and fruits yield well, both as to quality and quantity. The annual rainfall is about 40 inches, usually well distributed. About 80,000 acres are in cultivation, the annual harvest amounting to about 15,000 bales of cotton, 700,000 bushels of corn, 30,000 bushels of wheat, 250,000 bushels of oats, 60,000 bushels of Irish and sweet potatoes, 25,000 bushels of peas, beans and peanuts, 3,000 tons of hay, 600 barrels of sugar, 500 barrels of molasses, and 7,000 tons of cotton seed, the whole crop being valued at about $1,200,000. About 3,000 acres are cultivated in fruits and vegetables, and yield a money revenue of $100,000. Improved lands sell at $5 to $25 per acre; unimproved at $2 to $10 per acre.

The county was formed in 1848, and was named in honor of Isaac Van Zandt, Minister to the United States during the Texas Republic. The area is 840 square miles, and in 1890 the county had 16,225 inhabitants. It maintains 95 school houses, employs 181 teachers, and has 4,638 children of school age. The assessed values, for 1897, amounted to $3,438,743, of which $323,440 was assessed against live stock, consisting of 9,710 horses and mules, 13,901 head of cattle, 53 jacks and jennets, 1,144 sheep and goats, and 14,311 hogs.

Wills Point, a station on the Texas & Pacific Railway, is the largest town in the county, having 2,500 inhabitants. Among its institutions are 3 public schools, 2 banks, Wills Point Institute, 2 hotels, several cotton gins, a sash, door and blind factory, etc. It has 9 church buildings and several fine business blocks, and transacts a fairly large business in cotton, hides, grain, hay, live stock and country produce.



LONE STAR SALT CO., GRAND SALINE, TEXAS.

Grand Saline is noted for its extensive salt works, the Lone Star Salt Co. and the Texas Salt Works both having extensive works at this point. Their exports amount to 1,000 carloads annually. The other towns in the county are Canton, county seat, with 500 inhabitants; Edom, with 350, and Edgewood, with 200 inhabitants. Grand Saline and Edgewood are stations on the Texas & Pacific Railway.

THE RED RIVER COUNTIES. Under this head may be mentioned the counties of Red River, Lamar, Fannin, and Grayson, four rich, well developed and well populated counties, fronting on Red River, and traversed by the Transcontinental Branch of the Texas & Pacific Railway. They have some features peculiar to themselves, have the same general topography, nearly identical soils and resources, and about the same climate and rainfall. While there is an abundance of timber for all practical uses, there is absent the gloom of the dense forests. The bodies of timber are smaller, alternate with prairies of greater or lesser extent, and generally skirt the water courses. Limestone appears to be the prevailing rock, and the soils, while of considerable variety, are different in their characteristics from those common to the woodlands. The country, as a whole, is very attractive to intending settlers and offers many local advantages. Towns are more numerous and larger, and afford better local markets, than those in the woodlands, and the more open character of the country admits of easier social intercourse. Lands are higher in price, but considering the denser population, the prices are reasonable.

The water-shed lying between Red River and the Sulphur Fork of the same stream, traverses all four of the counties, being rather high and well defined in Red River County, but diminishing gradually as Grayson County is reached and other drainage systems interfere. The wide bottoms of Red River, forming an almost uniform strip through the four counties, is heavily timbered, the prevailing trees being black oak, overcup oak, walnut, ash, sycamore, and hackberry. The soil is a rich deep alluvial. South of that is a belt of land, 10 to 12 miles wide, with a sandy soil, covered with oak, hickory, walnut, ash, sycamore, and bois d'arc, and interspersed here and there with prairies; next is a strip of gray sandy prairie, from 3 to 5 miles wide, and then extending to the timber on North Sulphur Fork of Red River, and comprising about one-third of the area, are stiff black waxy prairie lands, noted for their fertility and capacity to resist the effects of drouth. South of these prairies, for a distance of about 7 miles, is a body of valuable timber growing on sandy soils. In this timber area are large patches of black heavy soils of extraordinary fertility. In the eastern half of Red River County there are some large stretches of short leaf pine timber.

The annual rainfall varies from 30 to 40 inches, and is very regular in its precipitation. The foregoing topographical description will apply, with slight variations, to all the counties, which are well watered by the rivers named and their numerous tributaries. The lands in the Red River bottoms produce per acre, one year with another, from $\frac{3}{4}$ to 1 bale of cotton, and from 40 to 60 bushels of corn. For the entire region the yield is from $\frac{1}{3}$ to $\frac{1}{2}$ bale of cotton, 25 to 35 bushels of corn, 10 to 15 of wheat, 40 of barley, 150 of sweet potatoes, 100 of Irish potatoes, 250 gallons of molasses, 150 gallons of sorghum syrup, $1\frac{1}{2}$ to 3 tons of millet, and all vegetables common to the latitude. Peaches, apples, pears, and plums are grown in great quantity. The apples are equal to any grown in the Southern States. Grapes, wild and domestic, of the standard American varieties, grow luxuriantly, and strawberries, raspberries, and blackberries yield handsomely. Probably nine-tenths of the country is very well adapted to general farming.

Some of the smaller streams cease to run during a portion of the year, but nearly all of them hold water in pools in their beds in the driest seasons, and together with tanks, or artificial ponds, furnish stock water in ample supply. There are some springs of pure water, and wells are obtained at a moderate depth at almost any desired point, the water in the timbered uplands usually being a pure freestone,

and in the black prairie land, more or less impregnated with lime. For drinking water, cisterns are much used. The open range is not sufficient, either in area or quality, to carry stock in good condition through the winter, and for about 3 months in the year they require more or less feeding. Nearly all the stock raised in this section of the country is of high grade and is worthy of the attention bestowed on it. The altitude of the country is from 600 feet to 900 feet above sea-level, and the temperature varies from 100°, on extra hot summer days, to zero, in January and February, the so-called cold snaps rarely lasting over 24 hours, and occurring only three or four times during the winter.

RED RIVER COUNTY. This county was settled as early as 1816–17, at which time a number of Austin's colonists stopped there a season, planted and harvested a crop, and then went further south. In 1836, it had sufficient population to organize. Its present area is 1,062 square miles, though originally it was much larger, having since lost territory by the formation of new counties. In 1890, it had 21,452 inhabitants, and since then the population has largely increased.

RED RIVER, NEAR CLARKSVILLE.

About one-third of the county is prairie land and about nine-tenths of its area is tillable. The timbered portion, in the eastern part, contains considerable quantities of valuable pine, and the 14 or more large saw-mills in the county transact a business of considerable magnitude. There are about 1,600 farms in the county, aggregating about 100,000 acres. The ordinary result of agricultural operations amounts annually to about 18,000 bales of cotton, 600,000 bushels of corn, 60,000 bushels of small grain, about 4,000 bushels of peas and beans, 2,000 tons of hay, 100 barrels of sugar, 800 barrels of molasses, and about 9,000 tons of cotton seed, the whole crop valued from $1,000,000 to $1,200,000.

The principal variety of grass is the sedge, which is common to all parts of the county. In the early

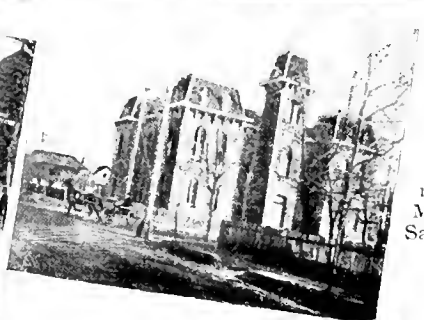
SCENES IN RED RIVER COUNTY.

VIEWS IN CLARKSVILLE.

1. Public School.
2. Court House.
3. Clarksville Oil Mill.
4. Public Square.
5. First National Bank.
6. Cotton Compress

part of the year, it affords some pasturage, but later becomes too woody to be of any great value. During the winter months, stock require the run of the fields and small grain pastures. There are no large herds in the county, as stock raising here is almost universally combined with agricultural operations. Of late years, particular attention has been given to the improvement of the grades of stock, and good thoroughbred cattle, horses and hogs, can be found on many of the farms. Hogs are raised cheaply, requiring but little attention, and considerable numbers are fattened on the mast in the forests. There were rendered for taxation, in 1897, 11,557 head of horses and mules, valued at $259,134; 15,002 head of cattle, valued at $107,403; 59 head of jacks and jennets, valued at $3,420; 1,768 head of sheep, valued at $1,520; 371 goats, valued at $236, and 18,644 head of hogs, valued at $20,897, the total value being $392,520.

The Texas & Pacific Railway traverses the county, near its center, from east to west, a distance of 34.22 miles, the principal stations being Clarksville, the county seat, population about 2,000; Detroit, population 800; Anona, population 300; Bagwell, population 200. The valuations of taxable property, in 1897, amounted to $4,216,313, of which $2,553,872 were assessed against real estate, $374,709 against railways, and $392,520 against live stock. The school population, exclusive of the larger towns, is 6,230, for whose education 51 schools are maintained and 128 teachers are employed. The business interests of the county are represented in 3 banks, with a capital of $200,000; some 80 mercantile establishments, a brick and tile factory, a cannery, 2 broom factories, and a number of smaller manufacturing enterprises.



Clarksville lies in the center of a rich agricultural district, transacting a large business in the export of cotton, hides, small grain and live stock. The population is progressive and enjoys the modern conveniences within the reach of smaller towns. It has a fine public school building, churches of the various denominations, a convent, a handsome and commodious court house, 2 banks, a steam planing mill, a saw-mill, a grist mill, cotton gin, and 2 newspapers.

LAMAR COUNTY, TEXAS. This county was named in honor of Mirabeau B. Lamar, one of the presidents of the Republic of Texas. It was formed in 1840 from Red River County, and has an area of 920 square miles. Its population in 1890 was 37,302, and it contains the following named cities, towns and villages:

THE CITY OF PARIS, the county seat, has about 12,000 inhabitants, and lies 588 feet above sea-level. It is an important shipping point and is a station on the Texas & Pacific Railway, which crosses the county from east to west. It is also the northern terminus of the Gulf, Colorado & Santa Fe and the Texas Midland Railways, and the southern terminus of the St. Louis & San Francisco Railway. It has many attractive public and private

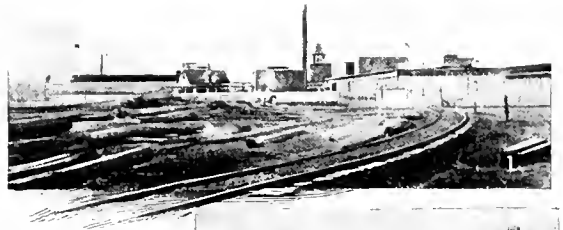
buildings, and there are invested in various local enterprises about $2,000,000, represented partially in 2 large planing mills, a cotton seed oil mill, 3 marble works, a candy factory, 2 ice factories, a gas and electric plant, etc., etc., the annual output being estimated at $1,500,000. The commercial transactions aggregate in value about $6,500,000 and consist, to a great extent, of the handling of cotton, wool, hides, corn, wheat, cotton seed and other country produce. The local banking capital amounts to $650,000. The city has a very perfect system of public schools and several higher colleges. The school population numbers 2,696.

Blossom, on the Texas & Pacific Railway, is a flourishing incorporated town of about 800 inhabitants. The other trading points are: Brookston, 237 inhabitants; Chicota, 321; Deport, 274; Roxton, 226; Petty, 206, and Pattonville, with 150 inhabitants. The commercial interests of the county are represented by 225 establishments, and the industrial in 6 saw-mills, 2 ice factories, 2 candy factories, a broom factory, a furniture factory, planing mills, flouring mills, brick yards, canning factories, etc.

The school population, outside of Paris, numbers 8,611, for whose education 156 school buildings have been erected and 167 teachers are employed. The taxable property in the county, for 1897, was valued at $9.857,082. Of this, $6,668,440 was assessed against real estate, $622,767 against live stock, and $640,550 against railways.

The lands in the county are most admirably adapted to agricultural pursuits, and nearly the whole area is suitable for cultivation. One-half or more of the county is enclosed in farms, varying in dimensions from 25 acres to 1,000 acres, there being about 2,800 farms, comprising about 200,000 acres, under actual cultivation. The crop values produced annually amount approximately to $2,500,000, to which must be added $100,000 for orchard, garden and apiary products.

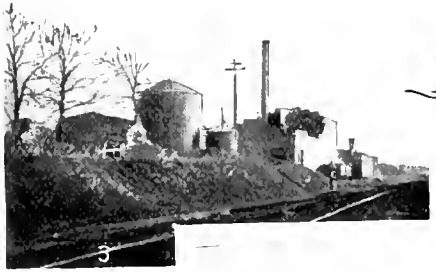
There is no range stock in the county, all animals being raised on the farms. As a rule, they are of the best grades, and, in 1897, numbered 19,063 horses and mules, valued at $461,026; 16,152 head of cattle, valued at $121,850; 184 jacks and jennets, valued at $6,900; 556 sheep, valued at $565, and 24,814 head of hogs, valued at $32,411.



VIEWS IN PARIS

1. Paris Oil Co.
2. Federal Building
3. Cotton Compress.
4. Public Square

HAULING MAMMOTH LOG TO SAW MILL.



VIEWS IN BONHAM.

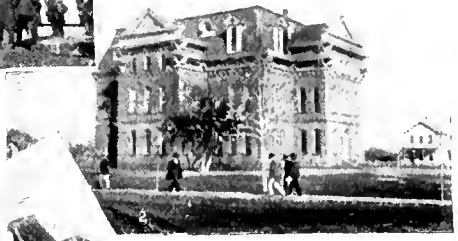
1. Court House.
2. Residence.
3. Cotton Seed Oil Mill.
4. Street Scene.

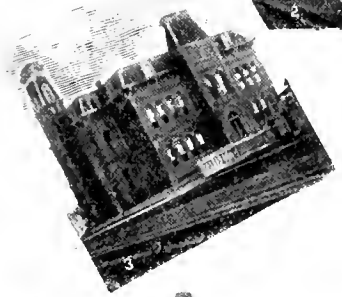
FANNIN COUNTY, TEXAS. A perpetual monument to the memory of Col. J. W. Fannin, who, with his entire command, was murdered, near Goliad, by the Mexicans, during the Texan revolution, in 1836, was erected by naming this rich and populous county in his honor. It lies between Grayson and Lamar Counties, has an area of 900 square miles, and in 1890 had 38,709 inhabitants, its present population being probably near 50,000. Fully four-fifths of the county is fine agricultural land, and while essentially a farming county, much attention is given to the raising of high grade live stock. About one-third of the county is timbered, but the wooded areas are interspersed with large prairies, except along Red River, where there is a continuous belt of forest.

There are about 3,000 farms and 200,000 acres in actual cultivation, yielding, one year with another, from 45,000 to 50,000 bales of cotton, from 1,600,000 to 1,800,000 bushels of corn, 125,000 to 200,000 bushels of wheat, 400,000 to 500,000 bushels of oats and other small grain, 32,000 bushels ot Irish and sweet potatoes, 4,000 bushels of peas and beans, 6,000 tons of hay, 1,500 to 2,000 barrels of sorghum syrup, and 23,000 tons of cotton seed, the whole crop worth from $2,700,000 to $3,000,000. Orchard, garden and apiary products are valued at $100,000 more. The native grasses are moderately abundant and nutritive. Winter feeding is necessary, to carry stock through profitably. The live stock, in 1897, was valued at $655,245, and consisted of 20,963 horses and mules, 15,793 head of cattle, 137 jacks and jennets, and 25,128 head of hogs.

The altitude of the county is between 700 and 800 feet above sea-level, and the annual rainfall is about 40 inches. Most of the streams carry water all the year round, and wells are easily obtained, the water being freestone in the timber areas and hard in the black, waxy prairies. Improved lands range in price from $15 to $40 per acre. The county school population of 8,832, is housed in 151 school buildings, and 177 school teachers are employed. The assessed value of taxable property, for 1897, amounted to $9,617,780. There are $101\frac{14}{100}$ miles of railway in the county, which are assessed at $765,190. It is traversed by the Texas & Pacific, Missouri, Kansas & Texas, Gulf, Colorado & Santa Fe, and Denison, Bonham & New Orleans Railways, affording excellent transportation facilities.

Bonham, a wide-awake, progressive little city, on the Texas & Pacific Railway,





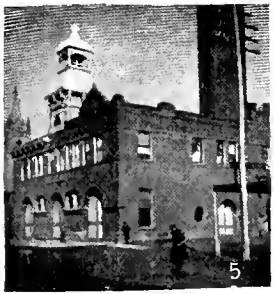
VIEWS IN SHERMAN.

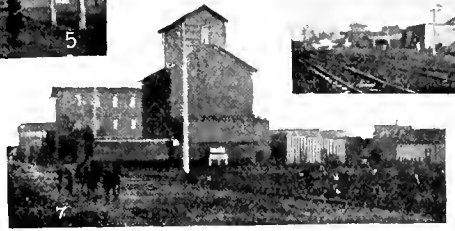
1. Street Scene.
2. Public School.
3. Public School.
4. Austin College.
9. St. Joseph Academy.
10. College.
11. 12. 13. Homes on Travis Street.
14. Street Scene.

is the county seat. It has about 5,000 inhabitants, is substantially built and transacts a large business in grain, flour, cotton and other local products. It is surrounded by what is conceded to be one of the finest agricultural districts in Texas. Among its manufacturing enterprises are 2 flour mills, 2 ice factories, 2 cotton seed oil mills and 2 cotton gins. There are 2 graded public schools, the Carleton College, the Fannin College, the Masonic Female Institute, 3 banks and 6 newspapers.

Honey Grove, also a station on the Texas & Pacific Railway, has 3,000 inhabitants, 7 churches, good schools, 2 banks, a cotton seed oil mill, a cotton compress, a flour mill, cotton gins, a stone quarry and 2 weekly newspapers. Its principal exports are cotton, grain, live stock, cotton seed oil, hides, wool, etc.

The other important trading points are Savoy, 400 inhabitants; Leonard, 400; Ladonia, 800; Ravenna, 300; Dodd City, 400; Trenton, 300; Valley Creek, 300, and Delta, 450 inhabitants. Mead Springs, near Honey Grove, said to contain iron and other minerals, is a noted local health resort.





VIEWS IN SHERMAN.

5. Fire Department.
6. Cotton Seed Oil Mill.
7. Milling Section.
8. Bagging Factory.

GRAYSON COUNTY, TEXAS. This county was named in honor of Peter W. Grayson, the second Attorney-General of the Republic of Texas. It is densely settled, was organized in 1846, and in 1890 had 53,211 inhabitants. Since then, the population has increased at least 40 per cent. It has an area of 968 square miles and lies from 700 feet to 900 feet above sea-level. Its general topographical characteristics are essentially the same as in the other counties fronting on Red River, about two-thirds of the surface being prairie land, and the remainder covered with timber, not in solid bodies, but alternating with the prairies.

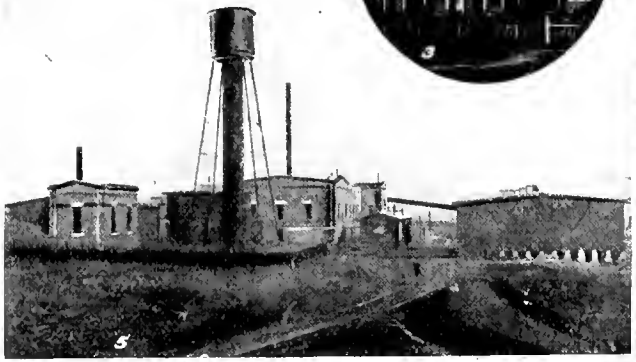
Fully nine-tenths of the surface is superior farming land, the highways presenting a continuous succession of farms or enclosed pastures, with farm houses at short intervals, indicating a large agricultural population. Soil, climate and rainfall (about 40 inches) are very favorable to diversified farming, and the cultivation, in a commercial way, of fruits and vegetables. Fruits of every description common to the United States, are grown for the Northern markets in great abundance. Wheat is grown extensively and reaches the market about the middle of May. There is very little open pasturage for stock, which is raised exclusively on the farms and consists of the most improved breeds. Good water is obtainable in all parts of the county, that of the uplands being freestone, and that of the black prairies more or less impregnated with lime. The number of cultivated farms in the county is approximately 4,000, comprising about 250,000 or 275,000 acres. The crop obtained annually is about 35,000 bales of cotton, 1,600,000 to 2,000,000 bushels of corn, 200,000 to 250,000 bushels of wheat, 1,000,000 to 1,500,000 bushels of oats, 80,000 to 90,000

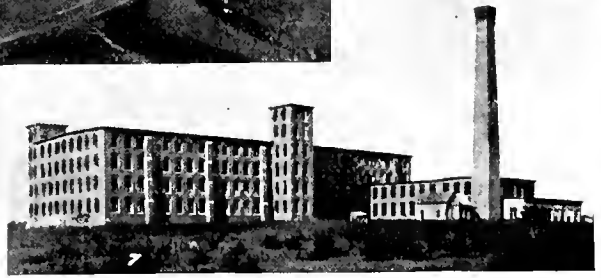
bushels of Irish and sweet potatoes, 10,000 tons of hay, 500 barrels of syrup and 20,000 tons of cotton seed, the value of which varies, according to quantity, time and price, from $2,500,000 to $3,000,000. The orchard and garden products yield a revenue of $125,000 to $150,000. No record has been kept of the doings of the feathered folks, or of apiary or dairy products, yet beyond question these items would run into large sums. In 1897, the live stock was rendered for taxation as follows: 26,453 horses and mules, valued at $622,576; 21,781 head of cattle, valued at $217,211; 1,454 head of sheep and goats, valued at $1,525; 257 jacks and jennets, valued at $13,275; 27,921 hogs, valued at $40,138.

The assessed values of all property in the county, in 1897, amounted to $17,045,403, of which $10,935,383 was assessed against real estate, $1,718,765 against railroads, and $894,725 against live stock. The school population numbers 8,256, and for their education 135 school houses are maintained and 161 teachers are employed.

VIEWS IN DENISON.

3. M. H. Sherburne.
4. W. H. Mills.
5. Oil Mill.
6. T. & P. R'y Station.
7 Cotton Mill





THE CITY OF DENISON is a well-built and attractive city of 12,000 to 15,000 inhabitants. It is situated 3 miles south of Red River and 9 miles north of Sherman, the county seat. It occupies an ideal site for a city, has excellent natural drainage, many miles of broad streets and avenues, well kept and lined on either side with handsome business blocks, churches, schools and private residences. The educational facilities are of the highest order, the city

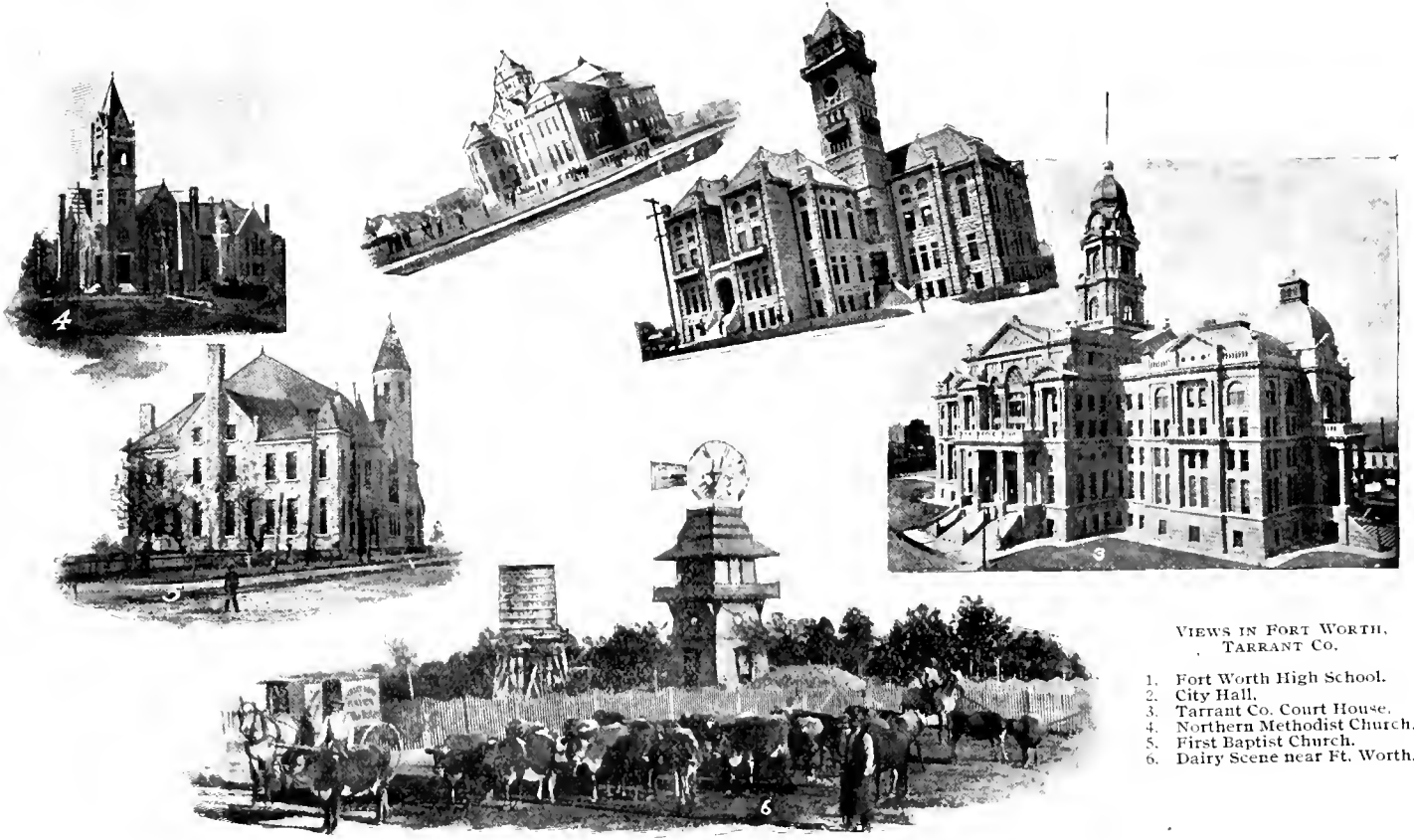
maintaining 6 commodious brick school buildings and a staff of 40 efficient teachers. Among the local establishments are 17 church organizations, an opera house, 3 National banks, 3 daily and 5 weekly newspapers, gas works, electric light plant, a fire department, a street car system, an ice factory, brick yards, cotton gins, flour mills, planing mills, a brewery, a soap factory, a fruit cannery, and a large cotton cloth mill, employing 700 people. The city is very advantageously situated, in regard to the proximity of supplies of coal, iron ore, water, timber, agricultural raw material, etc., necessary for the growth of a large city. The Texas & Pacific Railway, the Houston & Texas Central Railway, and the Missouri, Kansas & Texas Railway, furnish excellent transportation facilities.

THE CITY OF SHERMAN, the county seat, is situated in a fine agricultural region, near the center of the county. Like its neighbor, Denison, it is favored with good railway connections, the Texas & Pacific, the St. Louis Southwestern, the Gulf, Colorado & Santa Fe, the Houston & Texas Central, and the Missouri, Kansas & Texas Railways forming a junction here. Population about 10,000; the principal exports are cotton, grain, live stock, flour, cotton seed oil, hides, wool, farm produce generally and commercial truck. Among the local enterprises are an extensive electric light plant, water works, street car lines, an opera house, 2 banks, a handsome court house and many fine blocks of business houses, a cotton seed oil mill, 3 patent roller flour mills, cotton gins, an ice factory, seamless bag factory, 2 foundries, a cotton compress, the largest iron works in North Texas, marble works, brick yards, furniture factory, planing mills, carriage factory, and soap, broom, candy and mattress factories, as well as 2 daily and 3 weekly newspapers.

Sherman is a great educational center. Its public school system is conducted in accordance with the most approved modern methods and is of a high order, but in addition, there are several colleges noted for their high standard of excellency. Among those more famous are the Carr-Burdette Christian College for girls, the Mary Nash College, and Sherman Institute, founded in 1877, the North Texas Female College, founded in 1877, the Austin College and St. Joseph's Academy, the latter a business college.

Quite a number of small towns are scattered through the county. Of these, Bells, population 450; Whitewright, population 1,000; Howe, population 300; Van Alstyne, population 1,000; Collinsville, population 400; Whitesboro, population 2,000; Gordonville, population 200; Pottsboro, population 350; Pilot Grove, population 250, and Cedar Mills, population 200, are the more important.

Improved lands sell in Grayson at prices ranging from $25 to $50 per acre and are generally in good demand.



VIEWS IN FORT WORTH, TARRANT CO.

1. Fort Worth High School.
2. City Hall.
3. Tarrant Co. Court House.
4. Northern Methodist Church.
5. First Baptist Church.
6. Dairy Scene near Ft. Worth.

VIEWS ON TRINITY RIVER
DALLAS COUNTY, TEXAS

THE BLACK LAND COUNTIES. The well-to-do farmer of the Northern and Eastern States, seeking a change of climate for his health, or a greater diversity of production than the land and climate of the old home will admit of, can do no better than to avail himself of the comfort and social advantages peculiar to well populated neighborhoods. By making his new home in any of the counties fronting on Red River, or in the Black Land Counties, south thereof, he can find all of these. He can find soils to his liking, and can have prairie land or timber land, or both; as he may desire. He may cultivate the heavy black lands, or the chocolate colored loams, as he may prefer. Here he can purchase improved farms, in a high state of cultivation, and, with reasonable certainty, produce the staple crops of the country, grow fruits and vegetables with profit, and raise the finer grades of live stock to advantage. Within easy reach are good market towns, approachable over fairly good roads. Railway transportation is ample, convenient and cheap. The county admits of the use of all modern farming implements; schools and churches are already built, and the privations and inconveniences of pioneer life are practically dispensed with. Lands, of course, are higher in price, than in more thinly settled counties. The old settlers have done their share in developing the country. They opened up farms, built roads, built school houses, churches, railroads, aided the construction of flour mills, cotton gins, cotton seed oil mills, cotton compresses, and hundreds of minor enterprises. The new-comer, of course, cannot expect to have the benefit of these advantages without paying his pro rata share in the increased land values. Improved lands in the several counties vary in price from $15 to $50 per acre. Under the term "Black Land Counties," it is intended in this pamphlet to describe, more particularly, the counties traversed by the main line of the Texas & Pacific Railway, which lie between the Van Zandt County and the Brazos River, namely, Kaufman, Dallas, Tarrant, Denton, and Parker Counties, but the term is applicable to all the country between the woodland counties of eastern Texas, and the Brazos River, from the Red River counties as far south as Austin. While the counties present considerable variance in topographical features, they still have enough in common to warrant a general description.

About three-fourths of the entire area, 4,441 square miles, consists of high rolling prairies, of heavy black waxy soil, alternating in patches of deep red loam, easily tilled, and very productive. In Dallas, Tarrant, and Parker Counties, through which the several

branches and tributaries of the Trinity and Brazos Rivers flow, the surface is diversified, changing from comparatively level tracts, to high rolling lands, and even hills 300 feet in height. Along the water courses there is more or less broken land, covered with timber. In Denton and Kaufman Counties, the lands, while still undulating, are smoother and less broken near the water courses. About four-fifths of the whole area is tillable, though there is, perhaps, more waste land in Parker and Tarrant Counties than in either, or all, of the others. The timber in all the counties consists of post oak, black oak, red oak, live oak, burr oak, bois d'arc, pecan, hickory, elm, and black jack, very little, if any of it, suitable for the manufacture of lumber. The underlying rock is limestone, and in the black waxy soils it forms the principal mineral ingredient. In the red and gray sandy soils it is less apparent. The several forks and tributaries of the Trinity and Brazos Rivers perform the drainage of the country, which has a rainfall of 35 to 38 inches, and an altitude of 500 to 900 feet above sea-level. The water obtained from ordinary wells, 25 to 40 feet deep, is generally impregnated, more or less, with lime, and in some localities cistern water is preferred for drinking purposes. Artesian wells have been bored in all of these counties; the water obtained being "soft" and abundant. For stock raising purposes many "tanks," or artificial ponds, have been built, which hold water all year round. The native grasses are valuable, both for pasturage and for hay, and in Kaufman County, vast quantities are cut and shipped each year. In Tarrant and Parker Counties, much of the hilly and gravelly land forms most excellent pasturage, and is extensively used for this purpose. In the other counties, owing to the dense population, the open pasturage is limited. There are a number of large pasture and stock farms, and the open range is very rapidly being enclosed in farms, agricultural pursuits being the engrossing occupation of the population.

TRUCK FARM, TARRANT COUNTY.

With proper cultivation, and under ordinary favorable conditions, the yield per acre of the various crops is as follows: Cotton, from one-third to one-half of a bale; corn, 30 to 40 bushels; wheat, 10 to 20 bushels; oats, 40 to 60 bushels; barley, 30 to 40 bushels; sorghum syrup, 100 to 150 gallons; Irish potatoes, 90 to 100 bushels; sweet potatoes, 150 to 200 bushels; hay, three-fourths to one ton, millet, one and one-half to two tons. Peas, beans, peanuts, and all varieties of garden vegetables yield handsomely. Peaches, early apples, cherries, plums, grapes and strawberries, with ordinary attention, produce fruit of large size and fine flavor. Blackberries and dewberries are indigenous to the soil, and grow luxuriantly. The pecan and walnut trees bear heavy crops, and the nuts of the former have a high market value. Fruits and vegetables are exported from all of these counties, and quite an extensive business in orchard, garden, and apiary products has grown up.

The black waxy soils of Texas are peculiar in many ways. Porous as a sponge, they absorb im-

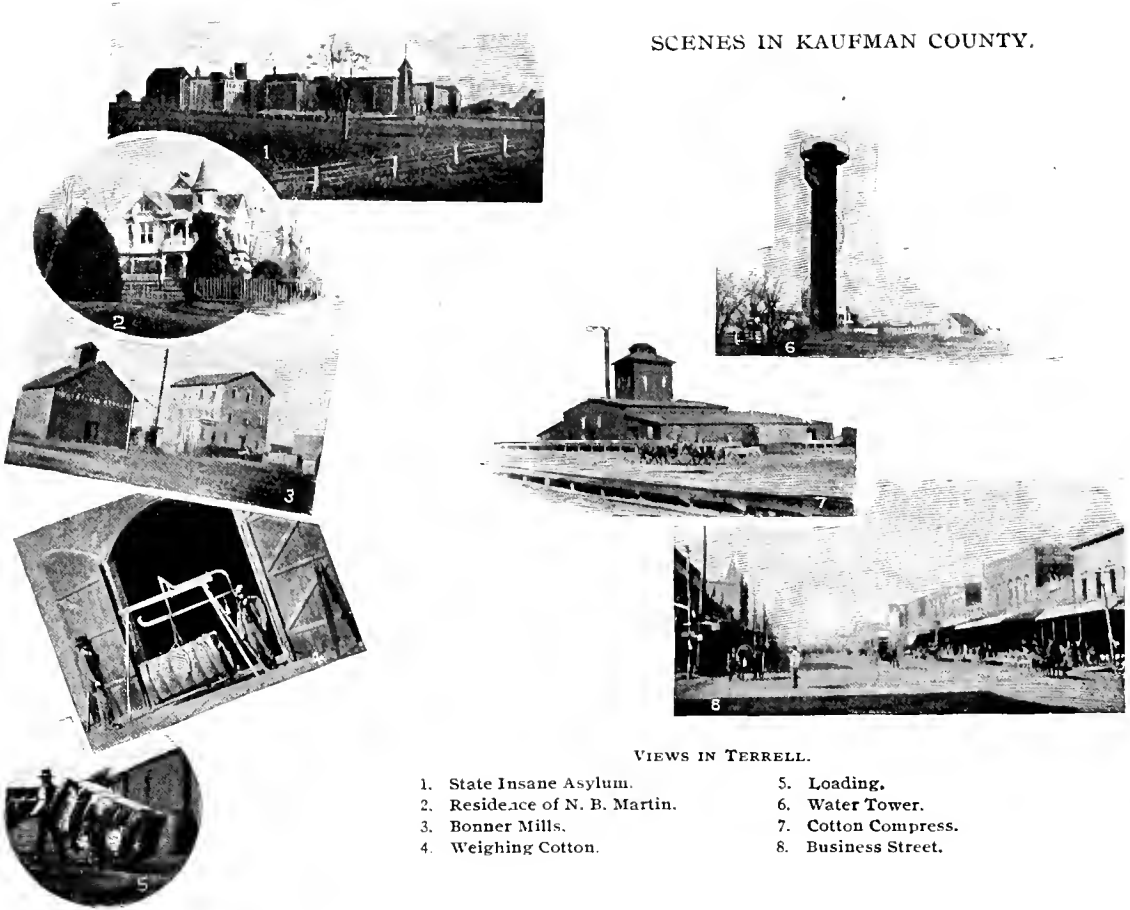
mense quantities of moisture, and retain it longer than almost any other soil in the State, except, perhaps, some of the sandy loams further west. The underlying rock is a soft limestone, cropping out, more or less, on the hill tops. While generally friable and easily cultivated, there are conditions of moisture when it becomes tenacious like pitch. Owing to the perfect drainage of the country, this condition seldom lasts longer than a few days, and after a thorough soaking and partial drying, few soils respond more favorably to cultivation. Stagnant waters there are none, and miasma and malaria are almost wholly absent. Owing to the great expanse of prairie, there is always room for the free movement of the air, purifying and carrying away the exhalations of the soil, which, not likely, but possibly could, induce disease. The nights, as a rule, are cool, and refreshing sleep is possible in the hottest weather. What few diseases there are in this region, usually yield readily to intelligent treatment.

KAUFMAN COUNTY, TEXAS. This county was created in 1848, and has an area of 832 square miles. The population, in 1890, was 21,598, and it has probably doubled itself since then. It lies in the heart of the wheat-growing region of Texas, but is very well adapted to diversified farming. Stock raising is a very important part of agricultural operations, as the native grasses are very valuable for pasturage and hay, and large quantities of the latter commodity are exported to other parts of the State. There are a number of comparatively large pasture and stock farms, but compared with the acreage in cultivation, they occupy but little space. The cattle, horses and hogs of this and the adjoining counties are considered the best in the State, in point of grade and purity of breed. The live stock consists of 13,958 horses and mules, valued at $344,584; 18,710 head of cattle, valued at $144,605; 108 jacks and jennets, valued at $4,695; 361 head of sheep and goats, valued at $346; and 11,501 head of hogs, valued at $17,657; the entire live stock being valued at $511,887.

There are, approximately, 2,000 farms in the county, comprising about 175,000 acres, producing, annually, about 25,000 bales of cotton, 800,000 bushels of corn, 300,000 bushels of small grain, 15,000 bushels of Irish and sweet potatoes, 15,000 tons of hay, and about 12,000 tons of cotton seed, the quantity of each varying with the demands of the market and the contingencies of the weather. The total value of the crop varies from $1,500,000 to $1,700,000. The orchard and garden products are estimated to yield, annually, from $50,000 to $60,000. The cities of Dallas, Fort Worth, and Waco, are within easy reach, and afford a fine market for everything a farmer can produce, and no better locality in the State can be found for operating small farms. Lands are cheap, and can be rented on acceptable terms.

COTTON PICKING—START FOR DINNER.

SCENES IN KAUFMAN COUNTY.



VIEWS IN TERRELL.

1. State Insane Asylum.
2. Residence of N. B. Martin.
3. Bonner Mills.
4. Weighing Cotton.
5. Loading.
6. Water Tower.
7. Cotton Compress.
8. Business Street.

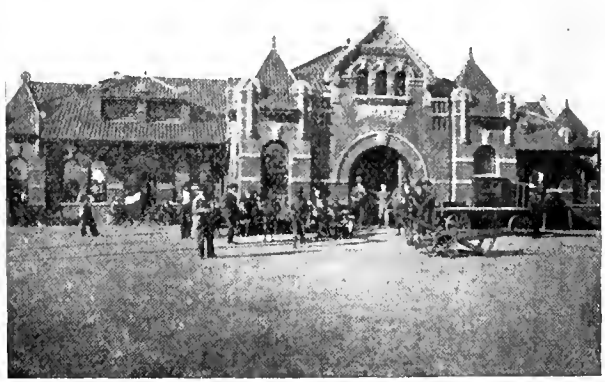
The taxable value of property in the county, in 1897, was rendered at $7,785,565, of which $5,241,521 was assessed against real estate, and $754,965 against railroads. Nearly all the American churches have organizations in the county, and all the advantages of social life common to a well settled locality in the older States, are found here. The county maintains 85 school-houses, employs 88 teachers, and has a school population of 4,696. The railway mileage in the county is 91 miles, and is the property of the Texas & Pacific Railway, The Texas Midland Railway, and the Texas Trunk Railway.

THE CITY OF TERRELL, situated at the crossing of the Texas & Pacific Railway, and the Texas Midland Railway, 32 miles east of Dallas, is the largest business point in the county. It is a well built little city, of 6,000 inhabitants, and maintains a great traffic in grain, cotton, flour, live stock, hides, wool, fruits, etc. Among its institutions are the State hospital for the insane, seven churches, a high school, several graded schools, an opera hall, two banks, an electric light plant, ice factory, cotton compress, flouring mill, two nurseries, a foundry, railway machine shops, several cotton gins, and several newspapers.

Forney, also on the Texas & Pacific Railway, is noted for its extensive exports of hay, cotton, bois d'arc timber and fence posts. It is a busy trading point of 1,500 inhabitants. Kaufman, the county seat, is located at the junction of the Texas Midland and Texas Trunk Railways, and has 1,500 inhabitants. The other trading points in the county are: Crandall, population 300; Kemp, 400; Prairieville, 250; Elmo, 600; Lawndale, 300; and Lawrence, 250.

THE CITY AND COUNTY OF DALLAS, TEXAS. The county of Dallas is the most populous county in the State, and stands first in taxable values. The area is 900 square miles, and its altitude above sea-level from 500 to 700 feet. The annual rainfall is about 38 inches, falling principally between September and July. The temperature varies from 100 degrees in mid-summer, to 15 degrees below freezing point in mid-winter. About three-fourths of the surface is high, rolling prairie, the remainder being somewhat hilly. About nine-tenths of the surface is capable of tillage. The prairie lands generally have a black waxy soil, which is very fertile; the upland hilly parts having lighter, sandy soils, and being naturally covered with timber. Along the river bottoms are areas of bois d'arc timber, which is used in the manufacture of wagons, hubs, spokes, street paving, and other purposes for which a hard, durable, unshrinkable wood is required.

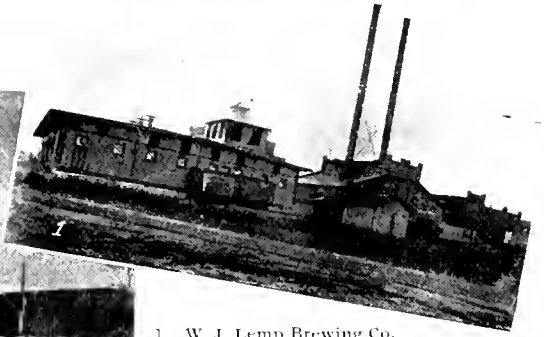
Being thickly settled, land values in the county are rather high, as compared with other counties. Improved farms range in price from $20 to $50 per acre. Unimproved lands are valued from $10 to $30 per acre. There is no record of the land actually under tillage, but it is a safe estimate to say that there are about 2,500 farms, comprising about 250,000 acres, under tillage. Many of them are quite large, being devoted to raising fine live stock. The annual yield of farm products

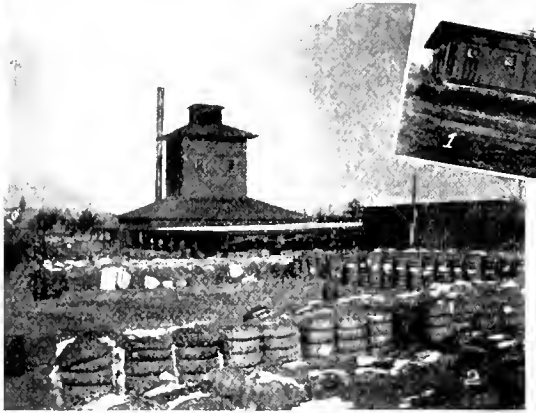


NEW UNION DEPOT EAST DALLAS TEXAS

VIEWS IN DALLAS.

1. General Offices T. & P. Ry.
2. Main Street.
3. North Texas Building.
4. Dallas Club
5. Grand Stand at Fair Grounds.





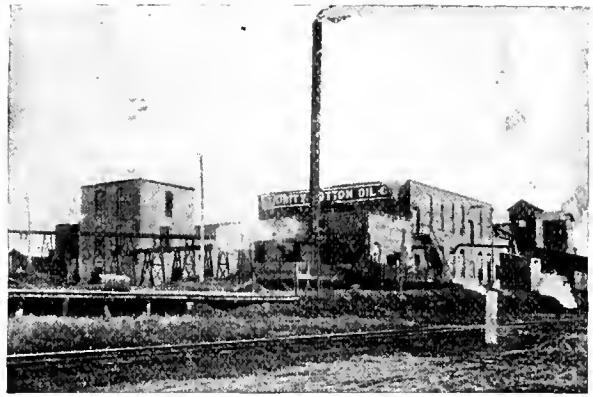
1. W. J. Lemp Brewing Co. Ice and Cold Storage.
2. Dallas Compress.

is approximately 40,000 to 45,000 bales of cotton, 1,400,000 to 1,700,000 bushels of corn, 300,000 to 325,000 bushels of wheat, 700,000 to 800,000 bushels of oats, 25,000 to 30,000 bushels of Irish and sweet potatoes, 7,000 to 10,000 tons of hay, and 20,000 to 25,000 tons of cotton seed. The value fluctuating between $2,000,000, and $2,400,00, according to season, prices, and demand.

The raising of fine dairy cattle, registered horses and hogs, is an important business, and registered breeds of all kinds of domestic animals can be found anywhere in the county. Native grasses are abundant, and of good quality, but, owing to the density of the population, very little open pasturage is available. Forage is raised in such abundance that thousands of cattle are brought in from the western ranges and fattened for the market. The live stock in the county, in 1897, consisted of 23,786 horses and mules, valued at $600,280; 20,790 head of cattle, valued at $225,050; 167 jacks and jennets, valued at $8,975; 6,599 sheep and goats, valued at $6,815; and 26,567 hogs, valued at $41,100; the value of the entire live stock being $882,220.

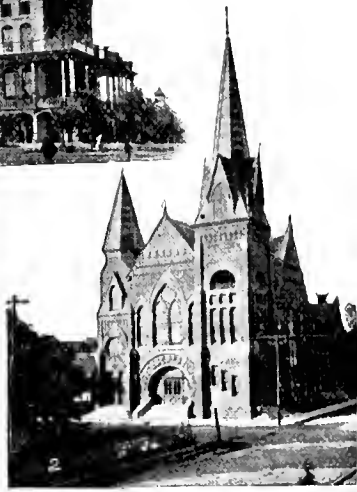
The natural drainage of the county is perfect, being performed by the Trinity River and its numerous tributaries. There is no stagnant water in the county. For domestic uses, good water is obtained from springs in some localities, but good well water is obtainable anywhere. Cisterns are used in some localities. Truck farming and fruit growing are profitable branches of husbandry in this region owing to the close proximity of the several large cities like Dallas, Fort Worth, and Waco.

The county was organized in 1846. The population, in 1890, was 67,042, to which 40 per cent may be safely added for the increase since the taking of the census. The



VIEWS IN DALLAS

3. Trinity Cotton Oil Co.
4. E. O. Standard Milling Co.
5. Lone Star Elevator.



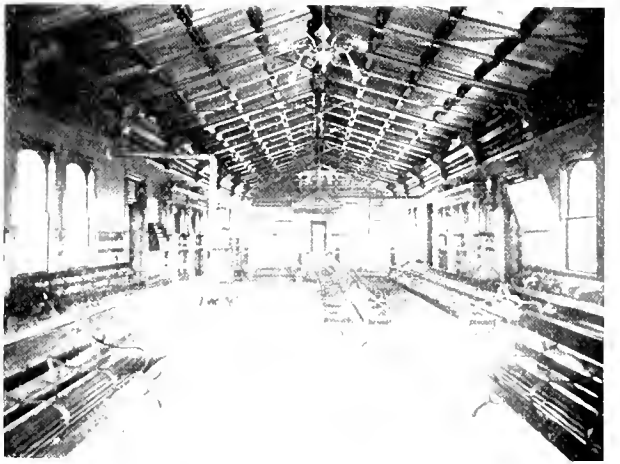
VIEWS IN DALLAS.

1. Episcopal College.
2. Baptist Church.
3. Cumberland Hill School.
4. San Jacinto School.
5. Residence W. H. Abram

taxable property in the county was rendered, in 1897, at $31,565,750, of which $23,993,680 was assessed against real estate, $1,811,780 against railways, and $882,220 against live stock. The combined railway mileage is $207\frac{67}{100}$ miles, and is divided among the Texas & Pacific, the Missouri, Kansas & Texas, the Gulf, Colorado & Santa Fe, the St. Louis Southwestern, and the Texas Trunk Railways. The county school population numbers 7,353; 121 school houses are maintained, and 152 teachers are employed. This does not include the school population of the city of Dallas, which has a municipal school system.

THE CITY OF DALLAS is a prosperous and rapidly growing commercial and manufacturing city, of about 60,000 inhabitants,

RESIDENCE G. M. DILLEY.



INTERIOR NEW UNION DEPOT, EAST DALLAS, TEXAS

situated upon a plateau, some 30 feet higher than the Trinity River, which is here crossed by the Texas & Pacific Railway. It has been settled since 1840, and was named in honor of Geo. M. Dallas, of Texas, one of the vice-presidents. Its growth was slow until 1870, when it had 700 inhabitants. In 1880, the population had increased to 10,267, and in 1890, to 41,011. Since then there has been an increase of 30 to 40 per cent. It is the most important manufacturing and commercial center in the State, having an abundance of raw material within easy reach, and unexcelled facilities for the distribution of its products.

Estimates of the volume of business transacted are published from time to time. They can, however, only be approximate. The mercantile business transacted, as nearly

as can be ascertained without a systematic census, will reach about the following figures: Dry goods, $9,800,000; groceries, $12,600,000; boots and shoes, $1,050,000; lumber, $1,400,000; drugs, $1,400,000; agricultural implements, $8,400,000; musical merchandise and jewelry, $700,000; sewing machines and furniture, $560,000; produce—eggs, chickens, butter, commercial truck and fruits, $700,000; cotton, 30,000, bales; wool, 100,000 pounds; hides, 1,260,000 pounds; cotton seed, 16,800 tons; corn, 261,800 bushels; wheat, 600,000 bushels; total value, $38,893,000.

DALLAS COUNTY COURT HOUSE.

There are about 100 extensive manufacturing establishments, and a great number of small industries. The investments in manufactures will run well into the millions, and the various factories are increasing yearly in number and capacity. The wages paid will probably exceed $3,500,000 per annum, and the value of the manufactured products will probably reach $9,000,000. The most

important local enterprises are the great cotton and woolen mills, an extensive meat packery, a boot and shoe factory, a paper mill, a brewery, a cotton gin factory, clothing and underwear factories, etc. Nearly all manufacturers of agricultural implements, machinery, wagons, pumps, wind-mills, boilers and engines, well-boring apparatus in other cities have branch houses here, Dallas being the greatest mart for goods of this class in the entire South.

The transportation facilities are excellent, and consist of the Texas & Pacific Railway, main line from New Orleans and Texarkana to El Paso, where connection is made with lines leading to Mexico, and all points in New Mexico, Arizona, and on the Pacific Coast; the Dallas and Wichita branch; the Dallas and Greenville branch; and the Dallas and Hillsboro branch of the Missouri, Kansas & Texas Railway; the Gulf, Colorado & Santa Fe Railway, the Texas Trunk Railway, the St. Louis Southwestern Railway, and the Houston & Texas Central Railway. Several have extensive shops, and the Texas & Pacific has its general offices here. The financial interests of the city are represented in 5 banks, having a capital and surplus of $4,000,000, some 24 land, loan and mortgage companies, and 4 or 5 building and loan associations, which disburse, annually, millions of dollars for farm and city improvements. The city has about 22 miles of paved streets, varying in width from 80 to 120 feet, the paving material used being macadam in the residence portion, and blocks of bois d'arc on the business streets. The sidewalks are generally made of stone, cement or brick. The street car lines have a mileage of 28 miles, and are operated by electricity.

Among its other institutions are city parks, several hospitals, charitable and benevolent societies, literary societies, church organizations, owning some 36 elegant places of worship, a full and complete school system; maintaining 20 stately and roomy school buildings, and 78 teachers. There are also 24 private schools, with some 60 teachers, and several high schools and colleges, conducted under the anspices of the several religious societies. Among the dozen or more hotels is the Oriental, a magnificent structure, erected at a cost of $600,000. The Texas State Fair is annually held at Dallas, where suitable grounds have been maintained for a number of years. The improvements cost about half a million dollars, and betterments are made every year. The annual attendance varies from 250,000 to 300,000 people. Among the 28 newspapers printed in Dallas, are two dailies, the *Morning News* and the *Times-Herald*.

Scattered through the county are a number of small towns, of which the following named are the more important: Garland population, 500; Mesquite, population, 200; Lancaster, population, 800; Cedar Hill, population, 300; Farmers' Branch, population, 250; Hutchins, population, 200; Grand Prairie, population, 200; and Carrollton, population, 200.

TARRANT COUNTY, TEXAS. This county has an area of 900 square miles, and adjoins Dallas County on its east boundary. In 1890, it had 41,142 inhabitants, the number having probably increased 30 to 40 per cent since then. The assessed values of taxable property in 1897, amounted to $20,904,977, of which $6,153,500 were assessed against lands, $8,377,600 against town property, $1,931,206 against railroads, and $587,025 against live stock owned in the county. The school population,

exclusive of the city of Fort Worth, numbers 4,223, who are housed in 98 public school buildings; 103 teachers being employed. Improved lands vary in price from $15 to $40 per acre; lands without improvements being generally in the market at $5 to $25 per acre.

Until within recent years, the raising of cotton, corn and live stock were the engrossing pursuits of the inhabitants, but, within the past decade, more attention is paid to diversified farming and commercial truck gardening, fruit growing, bee-keeping; the raising of fancy grades of live stock are more relied on as sources of profit than formerly. About four-fifths of the area of the county is fine tillable land, in kind and quality, about the same as in adjoining counties. The number of farms, either

FORT WORTH IRON WORKS.

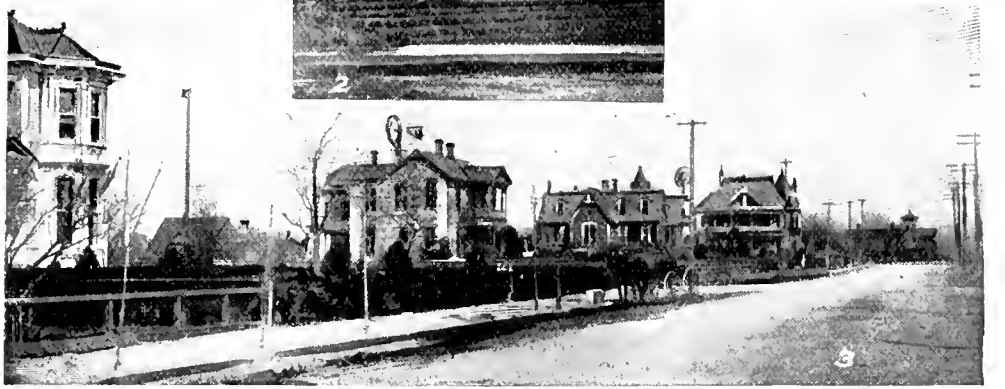
MAIN STREET, FORT WORTH

under tillage or used for stock raising is about 1,500, comprising, perhaps, 200,000 acres; the part under tillage producing, one year with another, about 15,000 bales of cotton, 800,000 bushels of corn, 400,000 bushels of wheat, 500,000 bushels of oats, 6,000 bushels of rye, 20,000 bushels of Irish and sweet potatoes, 7,000 tons of hay, 7,000 tons of cotton seed, and orchard and garden products to the value of $50,000; the whole crop worth, approximately, $1,225,000. The live stock interest is fairly large, the stock raised being of the highest grades and best breeds obtainable. In 1897, there were rendered for taxation, 18,326 horses and mules, valued at $335,390; 23,327 head of cattle, valued at $222,725; 137 jacks and jennets, valued at $8,290; 1,000 sheep and goats, valued at $975; and 14,984 head of hogs, valued at $19,645. There is practically no open range for stock in the county. Good water is obtainable anywhere in the county at a depth of 14 to 40 feet, and in the vicinity of Fort Worth are several hundred artesian wells. There are a number of small, active trading points, of which Arlington, with 700; Grapevine, with 500; Mansfield, with 500; Birdville, with 200; Dido, with 200; and Handley, with 200 inhabitants, are the more important towns.

THE CITY OF FORT WORTH, TEXAS. In the exact center of Tarrant County, on a high rolling plateau, some 650 feet above sea level, is the city of Fort Worth, the general trading point and commercial emporium for the vast stretch of territory generally known as the Panhandle of Texas. It has now about 45,000 inhabitants, and is one of the healthiest cities in the State. Its location in the State is 253 miles southwest from Texarkana, 32 miles west of Dallas, and 95 miles southwest from Denison. Its local agricultural resources are varied, and great in quantity, aggregating in value from $1,250,000 to $1,500,000. The commercial transactions are estimated to approximate, in dry goods, $7,000,000; in groceries, $9,000,000; in lumber, $100,000; in hardware, $100,000; in agricultural implements, $1,300,000; in furniture, $600,000; in jewelry, $100,000; and in produce, $300,000. The products of the surrounding country handled are estimated at about 15,000 bales of cotton, 500,000 pounds of wool, 800,000 pounds of hides, 700,000 bushels of corn, 2,850,000 bushels of wheat, and 150,000 head of live stock.

The transportation facilities are exceptionally good. The Texas & Pacific Railway main line passes through the city on its way from New Orleans to El Paso; its Transcontinental branch, extending from Texarkana, by way of Paris and Sherman, to Fort Worth, joins the main line here. The Fort Worth and Greenville branch of the Cotton Belt Railway, as well as the Chicago, Rock Island & Pacific Railway, have their termini here. It is also the initial point of the Fort Worth & Rio Grande, and the Fort Worth & Denver City Railways. The main line of the Missouri, Kansas & Texas Railway passes through Fort Worth, aud a branch of the Houston & Texas Central Railway extends from Fort Worth to Garrett; the Gulf, Colorado & Santa Fe Railway also passes through the city. Three of these railways have shops in Fort Worth, and employ a considerable number of men.

The water supply of the city is obtained from some 300 artesian wells, the largest of which have a flow of 300,000 gallons per day, the depth ranging from 115 to 2,000 feet. The municipal water works secure their water from the Clear Fork of the Trinity, and have an elaborate system of dams, pumps, mains and hydrants, bringing all parts of the city within the limits of fire protection. There are in operation about



VIEWS IN FORT WORTH.

1. Residence W. Scott.
2. Residence C. H. Silliman.
3. Hill Street Residences.

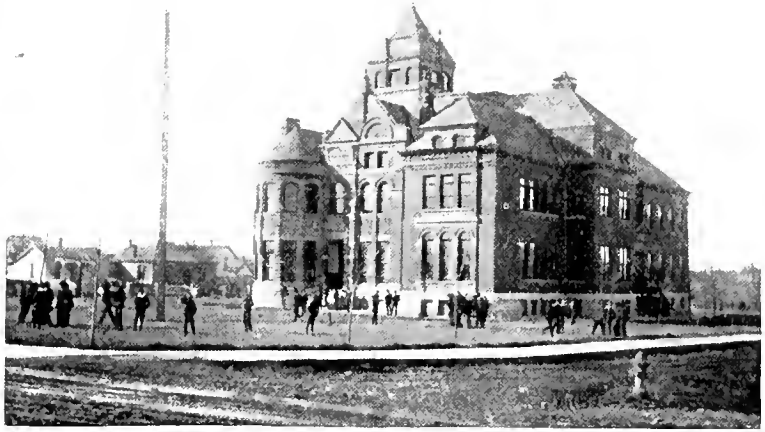
VIEWS IN FORT WORTH.

1. Stock Yards Exchange and Hotel.
2. Fort Worth Stock Yards.
3. Fort Worth Packing Company.
4. Board of Trade Building.
5. Hurley Office Building
6. Hotel Worth.

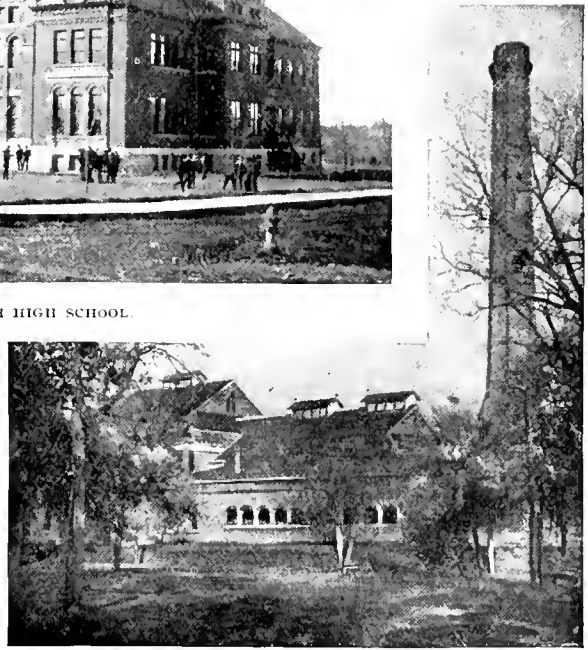
40 miles of electric street car lines, and of graded and macadamized streets about 100 miles, which are kept in perfect condition. Most of the sidewalks are constructed of either flagging, brick or cement, and in the residence portion most of the streets are shaded by trees. The city is lighted by electricity, and its fire department is equal to all emergencies.

The municipal educational facilities consist of 18 modern school buildings, in which 70 teachers are employed. About 5,000 pupils are annually enrolled. Private schools are numerous, and the Fort Worth University is justly famous in all parts of the State. The public buildings, in number, size and style—rank with those of any other city of its age in the country. Of the 19 churches, some are magnificent structures, and the Board of Trade Club and library buildings are some of the most handsome in the State. The number of industrial enterprises run into the hundreds, but the more important of these are the gas works, electric light plant, 5 grain elevators, capacity about $1,000,000 bushels; 4 roller mills, capacity about 1,500 barrels per day; several ice factories, a stove foundry, and the Fort Worth packing house, the largest institution of its kind in the South. There are invested in ground, machinery, buildings and working capital about $600,000; the daily capacity being the packing of 1,500 hogs, and 250 cattle. The Fort Worth Union Stock Yards cover over 500 acres, and are the largest south of Kansas City.

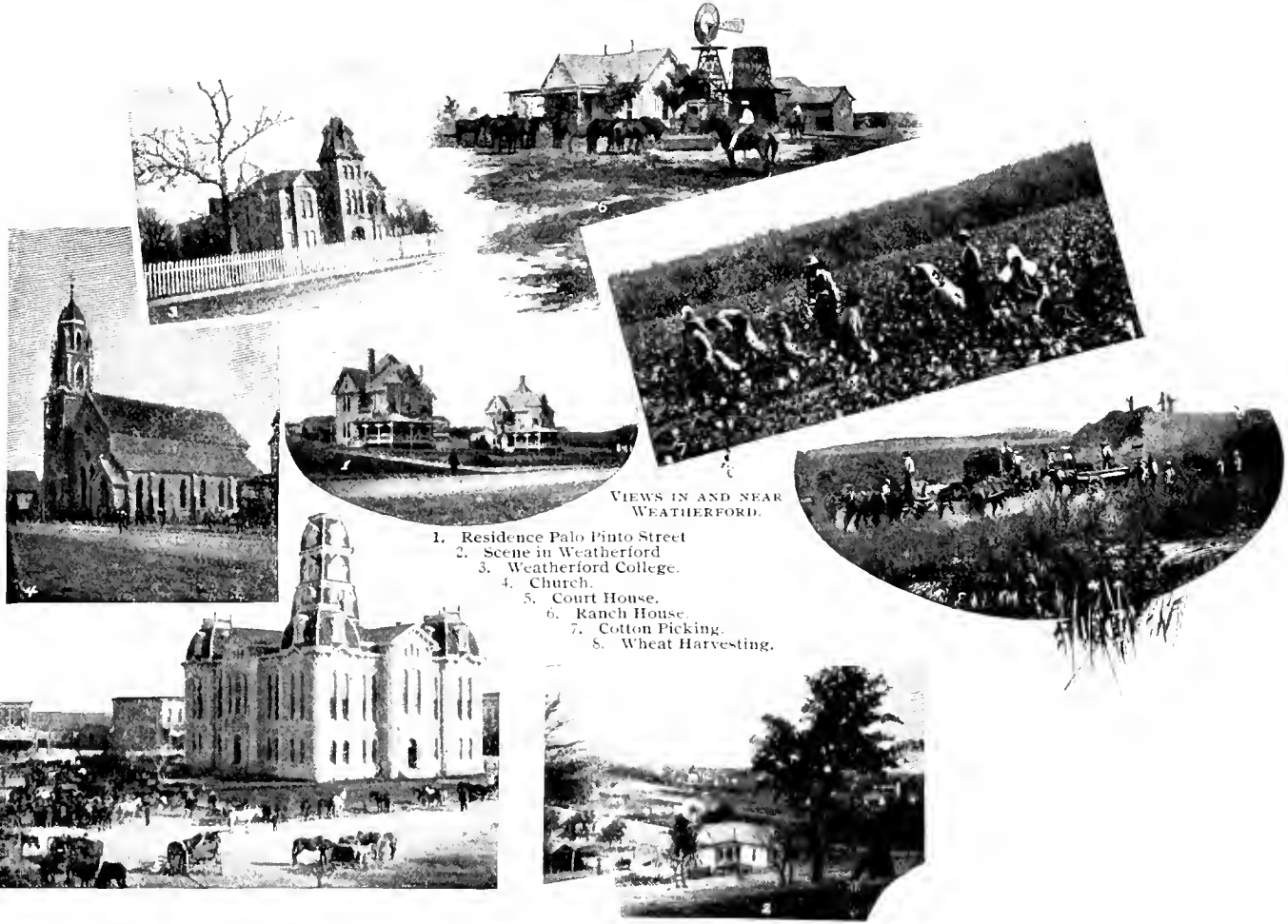
The local banking capital is about $5,000,000, divided among 7 banks The hotel accomodations are in every respect excellent.



FORT WORTH HIGH SCHOOL.



FORT WORTH WATER WORKS.



VIEWS IN AND NEAR WEATHERFORD.

1. Residence Palo Pinto Street
2. Scene in Weatherford
3. Weatherford College.
4. Church.
5. Court House.
6. Ranch House.
7. Cotton Picking.
8. Wheat Harvesting.

PARKER COUNTY, TEXAS. This county was formed in 1855, and adjoins Tarrant County on its east boundary. It has an area of 900 square miles, or 576,000 acres, and lies from 700 to 900 feet above sea-level. The eastern half of the county resembles the neighboring county of Tarrant, but is more broken and hilly, high hills, covered with a thin layer of soil, frequently rise from the smooth prairies. In the western half are considerable stretches of sandy land, covered with post oak, black jack, and similar timber. There is a greater diversity of soils than in the counties east and west; some of the lands are exceptionally fertile, and some are too gravelly for any other use than for pasturage. Water for stock is abundant everywhere; ordinary wells are from 18 to 40 feet deep, and in the northern part artesian water is obtainable at a depth of 250 feet. The annual rainfall is about 30 inches per annum.

BERRY PICKING, PARKER COUNTY

TEXAS & PACIFIC RAILWAY STATION DURING FRUIT SEASON.

General farming, fruit growing, truck growing, poultry raising, bee keeping, and the raising of live stock are the principal pursuits of the inhabitants, who in 1890 numbered 21,682, and have increased from 30 to 40 per cent since then. There are some 1,800 farms, truck farms and stock ranches in the county, about 120,000 acres being under tillage. The annual yield is about 18,000 bales of cotton, 600,000 bushels of corn, 115,000 bushels of wheat, 160,000 bushels of oats, and 1,000 bushels of other small grain; 300 barrels of molasses, and 9,000 tons of cotton seed, the values produced being about $1,100,000. Some 2,500 acres are devoted to fruits, truck growing, etc., producing annually a value of about $50,000 to $75,000. The live stock in 1897, was valued at $549,015, and consisted of 14,864 horses and mules, 24,490 head of cattle, 101 jacks and jennets, 966 goats and sheep, and 12,462 hogs. A great business is done

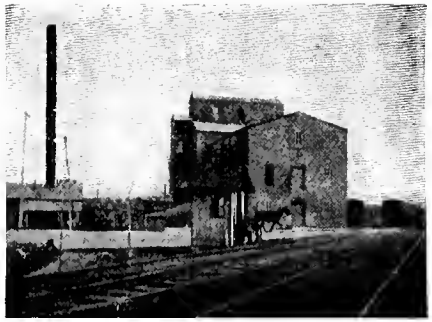
VIEWS IN DENTON.

1. Lone Star Nursery.
2. Public School.
3. Normal School.
5. Residence W. A. Ponder.
6. Residence Thos. Lovell.
7. Cottages.

annually at Weatherford, in the fattening of beef cattle brought in from the western range counties; cotton seed meal, hulls and farm forage being extensively used.

The assessed valuations of taxable property in the county in 1897, amounted to $6,338,575, of which $3,859,450 were charged to real estate, $571,250 to railroads, and $549,015 to live stock. Improved lands sell at prices ranging from $10 to $30 per acre; unimproved at $5 to $12 per acre. Pasture lands, good for grazing only, can be had much cheaper. The county maintains 90 school houses, employs 98 teachers, and has 4,746 children of school age.

Coal exists in the western part of the county, but has not been developed to any extent. White, red and brown sandstone, and white and gray limestone, both of superior quality, are abundant. A superior brick is made at Bennet, a station on the Texas & Pacific Railway, and of this and building stone, large quantities are exported.



ROLLER MILLS, WEATHERFORD.

THE CITY OF WEATHERFORD. The county seat of Parker county, is admirably situated in the midst of a fine fertile farming district, near the center of the county. It has between 7,000 and 8,000 inhabitants, and is the point of junction of the Texas & Pacific, the Gulf, Colorado & Santa Fe, and the Weatherford Mineral Wells, and Northwestern Railways, which have a combined mileage of $70\frac{58}{100}$ miles in the county. The city lies about 900 feet above sea level, is well built of stone and brick, and is a very attractive place. The principal traffic consists of the handling of grain, cotton, flour, coal, live stock, hides, wool, commercial truck and fruits. It has a good local school system, several private schools, 3 colleges, 3 national banks, 9 churches, an opera house, an elegant court house, 2 cotton compresses, several cotton gins, a planing mill, 2 flour mills, 1 ice factory, a fine brick and tile factory, a castor oil press, potteries and many smaller industries. There are several fine stone business blocks, and many handsome private residences. Three weekly newspapers are published in Weatherford. Other trading points of importance in the county are Springtown, population 700; and Will, population 300.

PUBLIC SCHOOL, DENTON, TEXAS.

DENTON COUNTY, TEXAS. This fine, rich black land county lies north of Dallas and Tarrant Counties, on the Transcontinental branch of the Texas & Pacific Railway. About two-thirds of its 909 square miles is high, rolling, black waxy prairie land. A narrow belt of woodland, mostly post oak, runs through the county from north to south, the same being interspersed with larger and smaller patches of prairie. The woodland soils are gray loams, easily tilled, and fairly fertile. Fully three-fourths of the surface of the county is tillable, and under proper cultivation will yield, one year with another, per acre, one-third to

VIEWS IN DENTON.

8. Oil Mill.
9. Street Scene.
10. Alliance Mill.

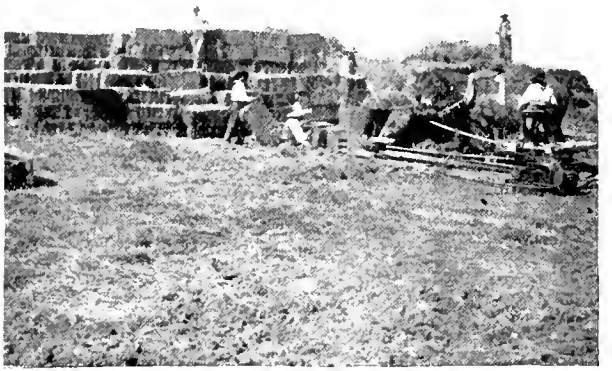
one-half bale of cotton, 30 to 40 bushels of corn, 12 to 20 bushels of wheat, 40 to 60 bushels of oats, 30 to 40 bushels of barley, 100 to 200 gallons of sorghum syrup, 90 to 100 bushels of Irish potatoes, 150 to 200 bushels of sweet potatoes, three-fourths to 2 tons of cultivated hay, and 1 ton of prairie hay. Fruit growing is carried on to a large extent, and peaches, early apples, cherries, plums, grapes and berries, yield large, handsome, and well flavored fruit. The annual rainfall varies from 33 to 35 inches, and is sufficiently well distributed to insure fair crops from year to year. The county is well drained, and has abundant water for stock. For household purposes it is generally obtained from wells, 16 to 40 feet deep.

The annual product of the county, grown on about 2,000 farms, comprising about 160,000 acres, is valued at $1,500,000 to $1,700,000, and consists, approximately, of about 30,000 bales of cotton, 1,500,000 bushels of corn, 1,000,000 bushels of wheat, 700,000 bushels of oats, 25,000 bushels of Irish and sweet potatoes, 1,000 bushels of peas and beans, 6,000 tons of hay, 300 barrels of sorghum molasses, 250 tons of sorghum cane, and about 15,000 tons of cotton seed. About $60,000 are obtained, annually, from truck gardening, bee-keeping, poultry and fruits. The live stock in the county is of high grade, and valuable. In 1897, there were rendered for taxation 20,926 horses and mules, 31,322 head of cattle, 174 jacks and jennets, 2,902 sheep and goats, and 19,672 hogs; the whole valued at $609,210. The county was organized in 1846, and had, in 1890, 21,289 inhabitants, the number of whom has increased about 40 per cent since then. The taxable property in 1897, was assessed at $7,528,765. The county maintains 92 school houses, employs 93 teachers, and has 4,757 youngsters of scholastic age. The transportation facilities of the county consist of the Texas & Pacific Railway, the Missouri, Kansas & Texas Railway, and the Gulf, Colorado & Pacific Railway, the combined railways having a mileage of $89\frac{9}{10}$ miles. The trading points in Denton County are the city of Denton, county seat; Pilot Point, population, 2,000; Roanoke, 350; Argyle, 250; Bolivar, 200; Lewisville, 600; and Little Elm, 200.

The City of Denton is 38 miles northwest of Dallas, and forms the junction of the Texas & Pacific, and the Missouri, Kansas & Texas Railways. It is a very neat, well built, and attractive little city, of about 4,000 people. Among its institutions are a commodious public school building, 7 places of worship, 2 banks, first class hotels, an efficient fire department, a fine opera house, 2 weekly newspapers, an elegant court house, electric plant, 2 roller mills, 3 grain elevators, an ice factory, 2 brick and tile works, 2 potteries, 3 cotton gins, a cotton seed oil mill, a cannery, a planing mill, etc. The principal exports are products from the surrounding country, and the local manufactures, such as cotton, oil, grain, brick, tile, pottery, hides, wool, fruits and commercial truck.

THE FARM, ORCHARD AND GARDEN IN TEXAS.

THERE was a time in the history of Texas, when the production of cattle, corn and cotton, were considered the only legitimate agricultural enterprises a gentleman could engage in. Even then, it was beneath the dignity of the land owner to do much more than "boss the job," while the tenants performed the manual labor. The work, performed in a primitive way, did not generally



MAKING AND BALING HAY ON LINE OF TEXAS & PACIFIC RAILWAY.

yield the results now obtained, but prices were good and that style of farming was fairly remunerative. The vegetable garden yielded the "greens" that were required, and the country store, or the larger store, at the county seat, furnished the other supplies. When settlement was had at the end of the year, the farmer was generally ahead. Later came railroads, immigration, new conveniences, new demands, competition in the production of cotton, and new conditions generally. While the old timer might have had some misgivings

about selling eggs and poultry at the county seat, the newcomer had no qualms of conscience in this respect. In place of the old razor-back hog, which could outrun a negro politician, they introduced the Poland-China, the Jersey Red and the Berkshire, and sat up o' nights to see that they staid on the farm. The long-legged, long-horned Texas steer, gave way gradually to the white-faced Hereford cattle, the Durham, the Holstein and the gentle Jersey, so that of the last named breed there are more registered cattle in Texas than in any other State of the Union. Next to Iowa, Texas leads in the number of fine hogs. The scantily-covered, short and coarse-wooled Mexican sheep have given way to the pure bred French and Spanish merino sheep, and other thoroughbreds. The long-horned beef steer has been improved from an 800 pound to a 1,200 and 1,400 pound animal. The old type has almost entirely disappeared. Good horses and mules can now be found almost anywhere in the State. While common barnyard fowl are still numerous, great progress has been made in introducing new varieties, and every first-class breed can be found on Texas farms.

TEXAS IN 1898.

TEXAS IN 1875.

In agricultural and horticultural lines, even greater progress has been made. The cheap and easy transportation afforded, made it possible to develop agricultural resources hitherto unthought of. Texas wheat, grown in a limited way, for home consumption only, has become a staple in foreign markets, being of the very best quality and the earliest in the market. About 500,000 acres are planted in this crop, yielding about 7,500,000 bushels. The Texas red rust-proof oats are famous wherever known and are always in demand. Fully 500,000 acres are devoted to this crop, which yields from 30 to 60 bushels to the acre. At 30 bushels, the yield will be 15,000,000 bushels. Figuring wheat at 75 cents per bushel and oats at 45 cents, we have a money value for these two crops of $12,345,000. The acreage in corn is about 3,500,000 acres, yielding an average of 20 bushels, or a yield of 70,000,000 bushels, worth, at 40 cents, $28,000,000. The cotton acreage has increased from 3,259,972

acres, in 1887, to 4,520,310 acres, in 1891, and probably 5,000,000 acres in 1897. At four-tenths of a bale per acre, the yield would be 2,000,000 bales, worth, at $25 per bale, $50,000,000. These, the great crops of Texas have, in two decades, almost quadrupled in acreage and yield, but there were grown at the same time large crops of barley, rye, millet, sweet potatoes, Irish potatoes, hay, sugar cane, sorghum cane, rice, and fruits and vegetables. Of the latter, there are probably 150,000 acres in cultivation, yielding a money value of $5,500,000. The exports out of Texas, of early fruits and vegetables, in 1897, is estimated to have reached the sum of $3,000,000, and among these exports were 2,800 carloads of cabbage.

The number of farms in Texas, as far as information obtainable justifies the estimate, is about 200,000, comprising about 12,000,000 acres, but not all of this is devoted to the cultivation of standard crops. Stock farming is an important business in many parts of the State, and on most stock farms large quantities of forage are grown. Ranches, where dependence is placed on the natural pasturage only, are not included. The crops grown to advantage in Texas differ in some respects from those grown in the Northern and Eastern States, because the prevalent climatic conditions admit of a much greater variety in production.

As in the other Southern States, cotton is the staple, the cash product of the soil. It is king in Texas, as well as in other States, and, of all crops grown, yields the greatest gross revenue. Of the entire crop grown in the United States, the Texas proportion is the greatest. The inhabitants of the earth must be clothed, and cotton is as cheap and durable a fibre as can be found for making cloth. Next to wool, also a great Texas product, it will be in popular favor as long as mankind exists, and Texas will do her share in clothing the millions yet to be born. Generally, the cultivation of cotton is profitable, but sometimes the production exceeds the immediate demand, and then, for a time there is a depression in prices, but for all that, it is a standard crop that will endure for ages.

Cotton is planted in spring, beginning about the middle of March along the Gulf Coast and ending about the middle of May in northern Texas. It does well in all parts of the State, being grown on the moist Gulf Coast, a few feet above sea-level, as well as on the high dry plains of the Texas Panhandle, at an altitude of 3,000 feet, and under irrigation it yields well at still greater altitudes. The yield per acre varies from one-third of a bale to one bale and a half, according to soil and rainfall. Under irrigation a good average of three-fourths of a bale can be secured year after year, though a yield of one and a half to two bales is not uncommon. In middle and northern Texas the average farm will produce from one-third to three-fourths of a bale, and where cultivation is thorough, and the rainfall timely, a bale per acre has been produced a number of years in succession. A bale of cotton ordinarily weighs 500 pounds, and the price varies from 5 cents to 8 cents per pound. It is sometimes grown on wheat stubble just harvested, though cotton planted as late as this is sometimes caught by early frosts. It will, however, make lint until killed by the frost, usually in November or December. Picking commences in July and lasts until February.

Corn is planted in Texas from February to June. It is sometimes cut down by frost in March or April, but generally comes up again from the root. Many farmers plant corn up to June 15th, but run the risk of being caught by early frosts in autumn. It ripens from August to November. It does well in all parts of the State, yielding a good average of 25 bushels to the acre. Under very favorable conditions of the weather it will, in some years, yield from 50 to 65 bushels, but owing to the cool nights which generally prevail, the average of the northern States is not reached.

Wheat, compared with cotton and corn, is grown on a limited scale, about 7,500,000 bushels being the quantity produced. The acreage devoted to this crop fluctuates with the market. Texas has certain advantages over other States in the production of wheat. It is sown in October and November and harvested from the middle of May to the middle of June, making it possible to ship wheat or flour north six weeks earlier than it can be produced there. It is heavier than the wheat of the Middle States, and can be transported by sea without deterioration. In Texas, it yields a good average of 15 bushels per acre, though 20 bushels are raised in quite a number of counties. In the irrigated regions, 40 bushels is the average, and 50 and 60 bushels are not uncommon. Northern and Central Texas produce the bulk of the wheat, though it has been produced 300 miles west of Fort Worth. It yields excellent crops on the

black waxy lands, and also on the chocolate-colored loams of the western prairie region, though the crop there is not so certain, unless the rainfall is timely.

The oat crop is a great one in Texas. It is highly prolific, and gives an average yield of 40 bushels to the acre. On the chocolate loams west of Weatherford it yields from 50 to 65 bushels, and crops of 100 to 120 bushels are not uncommon. The lower average, 40 bushels, is maintained on the black lands, and in the county north and east of them year after year, while in the westerly counties, owing to occasional irregular rainfall, the crop is sometimes scant, yet when a crop is made it is generally a large one. In the irrigated regions of the Pecos and Rio Grande Valleys, the average crop is from 75 to 80 bushels. Oats are sown in February and early March, and as the harvest is early, farmers generally obtain the best prices, which first products usually command. Besides, the land from which the crop has been harvested is still available for a crop of millet, sorghum, or even corn. The grain sells readily in middle Texas, for home use and for export, at 20 to 45 cents per bushel.

Barley and rye yield well in all parts of Texas, but are sown in the fall in order to secure green pasturage for stock, very little being produced for the grain. In the Rio Grande and Pecos Valleys, they yield from 30 to 40 bushels per acre. The barley grown in the Rio Grande and Pecos Valleys is the finest grown in the United States.

SORGHUM is grown extensively. In Eastern and Central Texas, large quantities of sorghum syrup are produced, the quantity obtained varying from 100 gallons to 150 gallons per acre, ordinarily selling from 40 cents to 75 cents per gallon. In these parts of the State, considerable quantities are also grown for forage, but in the western counties, it is grown in quantity on every farm, and few cattle and sheep ranches in the remote grazing counties are without their sorghum patch. Grown in eastern and central Texas, it yields from 2 to 4 tons to the acre; on the great Staked Plains, the yield, according to the season, is from 2 to 5 tons, and on the irrigated lands of the Rio Grande and Pecos Valleys, the yield is from 6 to 12 tons. In the counties west of the Brazos River and extending up the Pecos River for 200 miles, are grown vast quantities of Dhurra, Kaffir corn, Egyptian corn and milo maize. The grain is considered equal to Indian corn for live stock, when ground or crushed. This family of grain resists dry weather better than the Indian corn, rarely fails, and, under favorable conditions, will yield from 30 to 60 bushels per acre. It requires less time to mature than does Indian corn, and can be planted as late as June, when the summer rains set in on the Staked Plains and the mountain country beyond the Pecos River. Under irrigation, it yields from 40 to 80 bushels, if properly cultivated.

2. Water Melon Farm.
3. Making Hay.

SUGAR CANE AND RICE are grown almost exclusively near the Gulf Coast, where there are several extensive rice mills and cane sugar factories. In eastern Texas, sugar cane is grown more or less in all the counties, for home use, a coarse brown sugar and large quantities of molasses being made on the farms, where it is consumed. Very little of this sugar reaches the markets.

SUGAR BEETS are extensively grown in the Pecos Valley, some 4,000 acres being planted in this crop in 1898. There is an extensive beet sugar factory at Eddy, N. M., which consumes the crop grown in the Valley, and contracts each year with the farmers for

its supply of beets. The yield per acre varies from 5 tons to 20 tons, and the average price paid is $4 per ton. Beets are generally planted from the first of April to the first of June, and are harvested from October to February. They require much care and intelligent cultivation, being profitable if properly attended to. The sugar content varies from 12 per cent to 20 per cent, according to seed and cultivation. Beets can be grown profitably in central and northern Texas, and make most excellent feed for cattle and sheep. They will pay if grown for feed alone, but yield a good revenue if they can be disposed of at a beet sugar factory. None have yet been built in Texas, but several enterprises of the kind are under consideration.

HAY is generally secured by cutting the native grasses, in central and northern Texas, or planting millet or sorghum, broadcast or drilled. In eastern Texas but little hay is produced, but excellent pasturage is secured by planting Bermuda grass or Japanese clover, the latter being more of a volunteer than a cultivated forage. The switch cane along the water-courses is also valuable, particularly during the winter months, when the pasturage is increased by sowing barley or rye, which is grazed all winter and cut in May or June, sometimes for hay, sometimes for the grain. On the great plains and in the stock raising region generally, the native pasturage is the chief reliance. During the dry winter months, the grass is thoroughly cured, retaining all its nourishing properties, and is equal in quality to the best hay. Sorghum is grown extensively and kept in reserve, to provide extra forage for cattle with calves and ewes with lambs, and also as a protection against cold weather, or snow and sleet. In the Rio Grande and the Pecos Valleys are perhaps 25,000 to 30,000 acres in alfalfa, which is used both as pasturage and for hay. The yield varies from 4 to 8 tons per acre, and varies in price from $3 per ton in the stack, to $9 per ton baled. Alfalfa is usually sown either in April and May or July and August, and after the first year, will stand from four to six cuttings per annum. It is irrigated after each cutting and is generally ready for the next cutting in a month or six weeks, During the winter months, it affords good green pasturage, and in March or April is much sought after by flock masters, who bring in their ewes and lambs. During this time, the monthly rental paid for alfalfa pasturage is sometimes as high as $3 per acre. Alfalfa is a forage *par excellence* for work stock of all kinds, who get no other food, is superior feed for dairy stock, and hogs are raised on it exclusively, until they weigh about 250 pounds, say within 8 months after weaning, when they are fed Egyptian or Kaffir corn and are hardened up for the market. It costs about a cent a pound to carry a hog to maturity on alfalfa, and a superior animal in every way is produced.

Irish potatoes yield well in the early part of the year, and are grown successfully as far west as the 100th meridian, beyond which they require some irrigation. Maturing as they do in July and August, they do not keep well, and must be consumed soon after they are dug. In central and eastern Texas, July and August are generally too dry to admit of planting a fall crop. Aided by irrigation, a fall crop can be grown, and such late potatoes will keep as well in Texas as elsewhere. Sweet potatoes are grown in nearly all parts of the State, and do particularly well on sandy or loamy soils. They yield from 200 to 300 bushels per acre, and are highly prized. The sweet potato is not a good keeper, and is therefore generally left in the ground until wanted. Under irrigation they have yielded as high as 600 bushels to the acre. While preferably grown for human consumption, they have been found to make most excellent feed for fattening hogs, and in some parts of the State are considered a superior food for this purpose.

The Truck Garden. Until recently, say within the past 10 years, most garden produce was consumed almost entirely at home. Of late years there has been an extensive export of extra early fruits and vegetables to the Northern and Eastern markets. These exports include nearly all varieties of vegetables and fruits, such as melons, pumpkins, squashes, cantaloupes, cucumbers, turnips, beets, celery, cauliflower, onions, cabbages, rhubarb, asparagus, strawberries, blackberries and peaches. From the coast counties shipments of vegetables are made nearly all winter, and are continued until June. Strawberries frequently reach the market in March. Eastern Texas and central Texas appear in the markets a little later, shipping both north and west. Peaches come in about July 1, and continue late into the fall. Texas, besides being a great exporter of vegetables in spring, is also a great importer in fall. The exports will probably reach a value of $3,000,000 in spring, and a similar amount is paid out in fall for garden truck and fruits

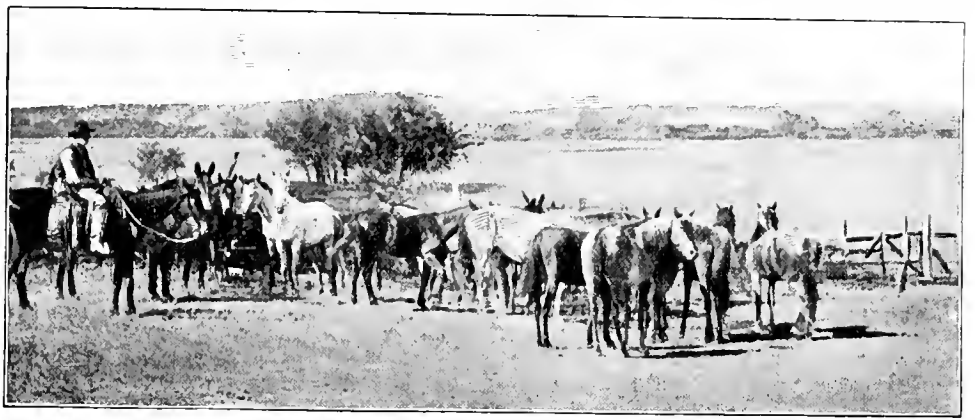
imported. The fall garden in Texas is profitable when carried on with irrigation, as July and August are rather dry, and a fall garden cannot always be started in time to yield a proper return without some irrigation. The fall crop embraces nearly all the vegetables grown in spring, but they are sold at much higher prices. Large quantities of celery, cauliflower, cabbages and onions are exported from the Rio Grande and Pecos Valleys from September to March.

Fruit Growing. As a separate and distinct business in Texas, fruit growing has only found a firm foothold within the past 20 years. It is carried on profitably in several widely separated localities. In northern, eastern and central Texas, the finest fruit is undoubtedly the peach. The Alexander and several other varieties ripen about May 12th. Many others mature during the summer and until the middle of November. By careful selection of suitable varieties, it can be arranged to have fresh peaches during at least six months in the year. In eastern Texas, where there is much iron in the soil, the fruit is highly colored and has an exquisite flavor. While secure from occasional frosts, they do not yield so well in the coast counties, but on the sandy loams of the western plains, where some irrigation is practicable, a handsome, well-flavored peach is grown. Apples do better in the more elevated portions of northern and western Texas than in the southern portions of the State. Several varieties cannot be successfully grown, even in northern Texas, but early apples, such as the Red June, Astrachan, American Pearmain, Buckingham, Shannon, etc., yield satisfactory results. In the Pecos Valley, under irrigation, the finest winter apples in the United States are probably grown. These apples are absolutely perfect in form, color, size and flavor, and are absolutely free from insect or fungus blemishes. The same can be said of the mountain orchards in the Davis and other mountains in western Texas. Cherries yield large crops in the same regions, but are unsatisfactory in eastern, northern and central Texas. Pear trees do very well and yield largely. In some of the coast counties, the fruit grows to extraordinary size. They yield fine fruit in northern Texas and are comparatively free from blight. In the Rio Grande Valley, at Ysleta, are pear trees of Spanish origin, which are 60 feet high and measure 4 feet through the trunk. They are said to be several hundred years old, and to be the largest and most prolific pear trees in the United States. Plums are natives of eastern, central and northern Texas, and all varieties, both foreign and improved native, do well. In the Rio Grande and Pecos Valleys, the Japanese varieties and the European prunes are grown by preference, and yield handsomely. Figs, apricots and nectarines are grown in the southern and central parts of the State and do as well as peaches. Of grapes, there are 8 or 10 native varieties, and all American varieties yield satisfactory results, up to an altitude of 1,500 feet. In the western part of the State, wherever irrigation can be had, the European varieties, such as the Mission of El Paso, the Flaming Tokay, Black Hamburg, Emperor, Rose of Peru, Muscat of Alexandria, etc., are grown with profit. Among the small fruits, blackberries, dewberries and algeritas are indigenous to the soil, and strawberries yield enormously. Among the wild fruits are three or four varieties of wild plums, several families of grapes, persimmons, pawpaws, may apples, etc. Nut trees do very well, the hickory, black walnut and pecan are natives, but the English walnut, filbert and almond, grow to perfection, where properly planted and taken care of. Along the Gulf Coast, oranges and bananas reach maturity, but are not grown in sufficient quantity to make any impression on the market.

FARM SCENE IN WESTERN TEXAS.

THE CROSS TIMBERS.

AS stated elsewhere in this pamphlet, the State of Texas is traversed north and south for a distance of several hundred miles, near the 99th meridian, by two belts of post oak timber, commonly known as the "Upper and Lower Cross Timbers." With their ramifications through several counties, they indicate a change in the geology of the country, marking, to some extent, the carboniferous areas in Texas. The Lower Cross Timbers are a narrow strip of timber, broken frequently by patches of prairie, and extending southward from near Henrietta, in Cooke County, through Denton, Tarrant, Johnson, and Hill Counties, to the Brazos River.



PASTURE—EASTLAND COUNTY.

The Upper Cross Timbers are much more extensive, and in the counties through which they run, there is sufficient variation in general characteristics to warrant a separate description. This would embrace the counties of Palo Pinto, Stephens, Eastland, Erath and Callahan, all of them being in the Texas coal measures, and having many features in common, though they differ materially from the counties lying east and west of them. All of these counties present considerable diversity in their soils. Clays of various kinds seem to predominate, though there are areas of fine loamy soils, and rich bottom lands. The general surface may be described as hilly, in places broken and rough, in others widening out into broad, smooth valleys. Other places consist of broad, flat mesas or table-lands, rising abruptly from the lower levels. The altitudes vary from 900 feet above sea level, to 1,600 feet, and the rainfall is about 28 inches per annum. About one-half of the entire area is suitable for general farming, the remainder being fairly good pasture land.

though much of it is rocky or gravelly. Nearly all the drainage of the country is performed by the tributaries of the Brazos River. These are very numerous, and are fed by hundreds of smaller streams and ravines. Owing to the uneven lay of the land, nearly all the water-courses have a rapid flow, and have deep channels. Most of them run dry during part of the year, but hold water in deep holes in their channel. Springs are numerous, and good wells are abundant, though frequently salty or sulphurous water is found. Coal is found in nearly all of the counties, and in Erath County it is mined extensively. Gray and brown sandstones, limestone, brick clay, fire clay, and potters' clay are present in all of the counties, and in some are turned to practical account. Gas and oil have been found in several, but no attempt has been made to develop them.

The post oak and live oak timber is found generally on the hilly lands, and where the country is much broken there is an abundance of cedar, of sufficient size for fence posts. In the valleys and "flats," there is usually a growth of mesquite timber, while along the streams the pecan, elm, cottonwood, lime and hackberry predominate. The soils vary with the "lay of the land." The bottom lands and deep valleys, where large enough for tillage, are exceptionally fertile, the prevailing soil being a deep, black loam. The tablelands have the red or chocolate loam of the "Plains Country," further west; all of them are easily tilled, and fertile. In the post oak areas are sandy soils, varying in fertility and in color, from light gray to mulatto. The different soils form so many combinations, that anything like a detailed description of them is impracticable. The country might be called "spotted," both as to soils and subsoils. Wild fruits, such as wild plums, grapes of several varieties, mulberries, algeritas and pecans grow in great profusion in sheltered localities.

The country, as a whole, is a fairly good farming region, supplemented by most excellent facilities for raising live stock cheaply and profitably. There is an abundant range, plenty of water, ample shelter, and range stock neither require, nor receive feed from the hand of man, unless fattened especially for the butcher's block. Of course, well bred stock, well taken care of, pays better, in the long run, than inferior stock left to shift for itself. Under ordinary conditions, and worked with ordinary farming implements, the yield obtained per acre, from the average farm, is from 600 to 1,200 pounds of cotton in the seed, 20 to 30 bushels of corn, 10 to 15 of wheat, 35 to 60 of oats, and one to one and one-half tons of hay.

The climate is salubrious, there being no excesses of either heat or cold. There is no stagnant water or other causes for disease. The mineral waters of the region are famous for their effect in cases of chronic ailments of various kinds, and are visited by thousands in search of relief. The farmer who "wants to give his boys a start," or wants more elbow room for himself and more land for little money, can do no better than to settle in one or the other of these counties. The tillable lands are just as good in quality as those further east, and grazing lands can be had very cheaply. The country is thinly settled, compared with the Red River or Black Land counties; natural pasturage is better and more abundant, and, owing to lack of population, within reach of everyone. As a farmer, wool grower and stock raiser, the three lines, if possible, carried on by the same individual, the prospects of the newcomer are good from the start. Large towns are not so numerous as further east, and farms are farther apart, but the schools, church facilities and social conveniences are sufficient for the population. The region is settling up, and within a few years agricultural lands will have reached the values common to the more densely settled counties of northern Texas.

THE COUNTY OF PALO PINTO, TEXAS. This county was formed from Bosque and Navarro Counties, in 1856, and has an area of 968 square miles, about one-half of which is covered with oak timber. The county is rather rugged and broken, with high hills, flat tablelands, and deep and fertile valleys. It has about 10,000 inhabitants, most of whom are engaged in farming and stock raising. While very well adapted to general farming, it is also an ideal country for stock farming. The general elevation above sea level is from 1,500 to 1,800 feet, and the average rainfall about 26.23 inches per annum. While crops are generally safe from drouth, and good harvests

are made year after year, it happens at long intervals, that either a spring crop or a fall crop is sometimes damaged, for want of rain at the right time. Not counting ranches exclusively devoted to stock raising on the natural pasturage, there are about 1,000 farms in the county. The agricultural products are estimated to amount to, annually, about 5,000 bales of cotton, 200,000 bushels of corn, 30,000 bushels of wheat, 60,000 bushels of oats, 1,500 bushels of other small grain, 1,500 bushels of Irish and sweet potatoes, 1,500 tons of cultivated hay, 500 tons of sorghum cane, 100 barrels of sorghum syrup, and 2,000 tons of cotton seed. The orchard and garden products, grown on some 1,800 acres, are valued at about $8,000; the entire acreage in cultivation, some 50,000 acres, producing, annually, a value of $250,000 to $275,000.

Stock raising in the county is usually carried on as a separate and distinct business, the principal object being rather to produce butchers' stock than dairy stock. Very little feeding is done during the year, except to fatten stock for a month or so, on corn and cotton seed before sending to market. The live stock in the county, in 1897, was rendered for taxation, as follows: 9,486 horses and mules, valued at $145,835; 30,748 head of cattle, valued at $235,511; 62 jacks and jennets, valued at $2,643; 593 head of sheep and goats, valued at $441; and 8,218 hogs, valued at $9,066; the whole live stock being valued at $393,496.

The value of all property in the county, rendered for taxation in 1897, amounted to $3,282,305, of which $366,461 was assessed against 44.44 miles of railroad, $1,817,232 against land, $375,941 against town property, and $393,496 against live stock. The school population numbers about 2,000, for whose benefit 47 school houses and 50 teachers are maintained and employed.

Bituminous coal is found in many places in the county, and at Rock Creek, a station on the Weatherford, Mineral Wells and Northwestern Railway, coal is mined extensively. Thurber Junction, a station on the

FARM SCENE, PALO PINTO COUNTY.

Texas & Pacific Railway, is an important shipping point for this commodity also, the daily export amounting to about 1,000 tons. Gas has been found in a number of wells, but no effort has been made to put it to practical use. The Brazos River, which meanders through the county for a distance of 200 miles, and Palo Pinto Creek, together with the numerous tributaries of both, afford all the stock water required, though this is supplemented by storage tanks and reservoirs on the stock farms. Drinking water is obtained from wells, but is not uniformly good, some localities having to depend on cisterns.

The Texas & Pacific Railway crosses the southern part of the county, the towns of Strawn, Gordon and Thurber Junction being stations thereon. The Weatherford, Mineral Wells & Northwestern Railway enters the county in the northeastern part, and has its terminus at Mineral Wells, a famous health resort.

Improved lands in the county sell at prices ranging from $5 to $15 per acre; unimproved farm lands from $2 to $5 per acre, and unimproved grazing lands even much cheaper.

Palo Pinto, the county seat, has no railway facilities. It has about 1,200 inhabitants, the usual mercantile, industrial and social facilities of a town of its dimensions, and is a good local trading point.

THE CITY OF MINERAL WELLS is the largest town in Palo Pinto County, has a population variously estimated to be between 1,800 and 2,200 inhabitants. Its situation and surroundings, and its mineral waters are favorable to the growth of a fairly populous town. It is well and favorably known as a health resort, without equal, its waters being considered by the thousands who have sojourned there, as a panacea for most ills that the human family is heir to. The city is located on a high plateau of gently sloping land, drifting into a smooth valley a few miles distant. Situated as it is, at the foothills of the Palo Pinto mountains, it commands one of the finest views of the Millsap Valley, a succession of fine farms, woodlands, patches of prairie, skirted on either side by high wooded hills.

On the town site are some 200 wells, from 50 to 200 feet deep, all of which have mineral ingredients and are medicinal in character. Some 10 or 15 of them are in constant use for the treatment of patients, who number about 5,000 annually. While the wells have the same general characteristics, there are differences that make some of them more desirable than others for the treatment of special ailments. All of them have been analyzed, but the printing of the analyses would convey but little information to the general reader. The same can be obtained at any time by addressing publisher *Mineral Wells News*, Mineral Wells, Texas. In addition to the usual commercial and social facilities of a town of 2,000 people, Mineral Wells has 4 bath houses, 6 large and commodious hotels, to which has been added recently the "Hexagon," a large modern hotel, unique in design and fitted up with all modern conveniences. Parks and boulevards have been laid out, and measures are taken to make the place as attractive as possible to visitors.

The use of the waters is advised in dyspepsia, and they aid greatly in inducing proper digestion. They act beneficently on the kidneys, and are of great utility in fevers, rheumatism, gout, congestion of the kidneys, bladder, etc., as well as of great value in gravel and other disorders of the kidneys. They are almost a specific for rheumatism, and for diseases peculiar to women of an advanced age. Disorders of the brain, induced by change of life in elderly women, are frequently cured by waters taken from "The Crazy Well," at Mineral Wells.

These waters are taken internally for dyspepsia and other stomach troubles, but for other ailments are used as baths. There is at Mineral Wells a staff of able physicians, under whose advice the proper course of treatment is taken. The expenses of a patient for

one month, maximum and minimum, are as follows, there being in addition to the hotels some 40 private houses at which board and lodging can be had:

Board and lodging	$12.00	to	$40.00
Baths	3.00	to	10.00
Attendance at bath			5.00
Physicians' fees	10.00	to	30.00
Medicines	1.00	to	5.00
Total	$26.00	to	$90.00

The city of Mineral Wells is easily reached by any line of railway, connecting with the Texas & Pacific Railway, and through tickets to Mineral Wells can be had anywhere in the United States.

STEPHENS COUNTY, TEXAS. In most of its topographical features, this county resembles the adjoining county of Palo Pinto. It has about the same elevation above sea level, the same annual rainfall, the same proportion of timber and prairie land, and the same agricultural resources. It was formerly part of Bosque County, and was organized in 1890, as Buchanan County, being changed to Stephens County, in 1861. In 1890, it had 4,725 inhabitants, of whom 462 were inhabitants of Breckenridge, the county seat, 225 of Gunsight, and 85 of Caddo, the other trading points in the county. The principal business of the population is farming and stock raising, there being about 700 farms in the county, a number of them being operated as stock farms. About 25,000 acres are in cultivation, producing, annually, about 2,500 bales of cotton, 1,500 tons of cotton seed, 50,000 bushels of corn, 40,000 bushels of wheat, and about 40,000 bushels of oats, as well as large quantities of sorghum for forage. The crop varies in value from $150,000 to $200,000. The live stock interest, in proportion to population is large, there being in the county, in 1897, 8,784 head of horses and mules, valued at $126,646; 24,081 head of cattle, valued at $197,372; 124 jacks and jennets, valued at $4,679; 3,033 sheep and goats, valued at $2,921; and 4,338 hogs, valued at $4,254, the total value being $335,872.

The several tributaries of the Brazos River, flowing through the county, furnish most of the stock water required. Some of them cease to flow part of the year, but water is always found in the deep holes in their beds. Farm and ranch tanks and storage reservoirs are quite numerous. There are some good springs scattered through the county, but for household uses water of excellent quality is obtained from wells

VIEWS IN MINERAL WELLS.

1. Howard Residence.
2. Res. of Dr. Blackburn.
3. Sangara Mineral Wells.
4. Oak Street

CATTLE RANCH, STEPHENS COUNTY.

varying in depth from 15 to 60 feet. A large part of the county is suitable for cultivation, there being about the same diversity of soils as in the adjoining counties. Nearly the whole area is covered with mesquite grass, the most nutritious of the native grasses. Stock feed on it all year round, and where the land is not over-pastured, cattle remain fat and keep in good condition all winter.

Coal exists in several places near the line of the Texas & Pacific Railway, which crosses the southeast corner for a distance of $5\frac{7}{10}$ miles. Hematite and magnetic iron ore have been found in large quantities in the northern part of the county. Traces of copper have been found in several places, and near the coal fields are strong indications of the presence of petroleum. Building stone of good quality is abundant, and a few quarries have been developed. Lands, improved, range in price from $5 to $10 per acre; unimproved, from $2 to $5 per acre, usually on long credit terms. The county maintains 37 school houses, employs 40 teachers, and has about 1,600 youngsters of scholastic age.

The assessed values of taxable property in 1897, amounted to $2,472,845, of which $1,923,986 was assessed against lands and town property, $50,745 against railroads, and $335,872 against live stock.

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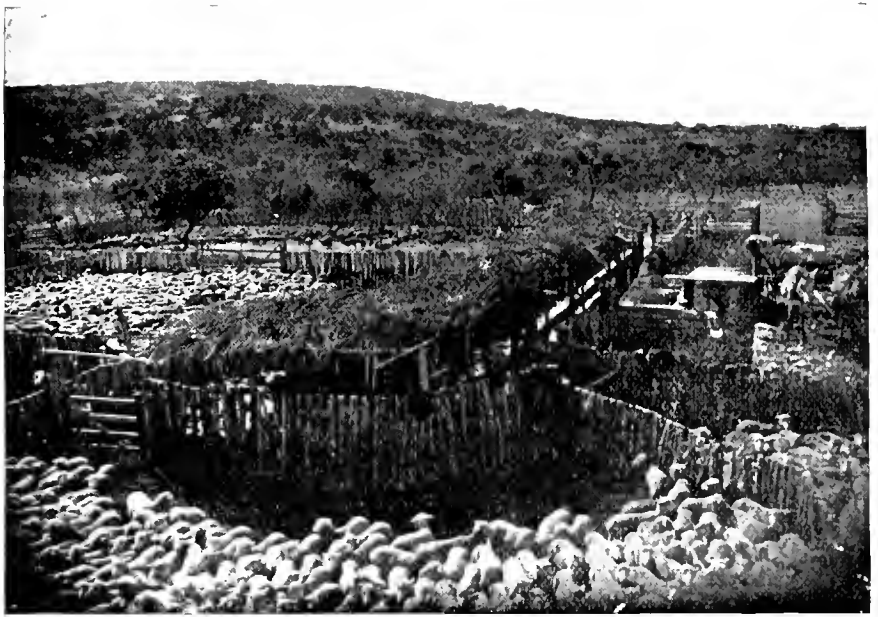
ERATH COUNTY, TEXAS. This is a wide-awake, progressive county, lying in a triangle, formed by the Texas & Pacific Railway, the Texas Central Railway, and the Brazos River. Its north boundary is formed by Palo Pinto County, Stephenville, the county seat, is about 65 miles southwest of Fort Worth. The county was organized in 1856, and was formerly part of Bosque and Coryell Counties, its area being 1,042 square miles. In 1890, it had 21,594 inhabitants, and this number has greatly increased since then. A short branch of the Texas & Pacific Railway, extending from Thurber Junction to Thurber, enters the county from the north. The Texas Central Railway passes through the southern portion, and the Fort Worth & Rio Grande Railway traverse the county in a southwesterly direction. The entire railway mileage in the county is $68\frac{57}{100}$ miles, valued at $309,988.

The county is within the true coal formation, and coal and indications of coal are found in many places. At Thurber, a town and mining camp, 4 miles south of the Texas & Pacific Railway, is the largest coal mining district in Texas. The town is clustered around the original shaft, from which coal was mined at the inception of the present enterprise. At the present time the town has 4,000 inhabitants, of whom 1,200 are employed in some capacity by the Texas & Pacific Coal Company. The company has eight mines in

operation, all fitted out with modern appliances for quick and effective work. All the mines are lighted by electricity, the coal cars under ground being moved by the same medium. Above ground electricity is applied wherever practicable. The largest brick yards in the State are also carried on here, the daily capacity being over 150,000 bricks per day. The clay used is the best in the State, and the brick turned out are equal to the best produced anywhere in the country. The people of the town are thrifty, and are comfortably housed. The town is not incorporated, being on lands of the coal company, but has all the conveniences common to a larger place. It has water works, an ice plant, electric plant, a theatre, public library, a club house, an orchestra, a high-class weekly journal, a small packery, several good hotels, a large bakery, a dairy in all respects up-to-date, a cotton gin, flour mill, church buildings of the various denominations, school buildings, lodge rooms for the several benevolent orders, large store houses, and, in short, every convenience a community of 4,000 people could find practical use for. When working up to their full capacity, the mines can export 3,000 tons of coal per day, and the coal supply in the vicinity of Thurber alone is sufficient to last a good many years.

Mineral springs and wells are numerous in the county, and for those at Duffau and Hico, special merits are claimed as curative waters. They are highly recommended for the treatment of diseases of the liver, for general debility and chronic disorders of various kinds. The waters from the artesian well at Thurber are similar in analysis to those of Carlsbad in Germany, and Bath in England. They are recommended for the treatment of disease of the liver, such as sluggishness, catarrh and jaundice, catarrh of the intestines, causing chronic diarrhea, catarrh of the stomach, chronic constipation, anæmia, skin diseases, gout and rheumatism, weak eyes and inflamed eyelids. In most of these diseases the water should be used as a bath as well as to drink it, but in all cases the advice of a physician is necessary.

Away from the mining district, the population is essentially a farming community. There are about 2,500 farms in the county, comprising, in general crops, about 125,000 acres. About 12,000 bales of cotton, 300,000 bushels of corn, 40,000 bushels of wheat, 200,000 bushels of oats, 3,000 bushels of Irish and sweet potatoes, 2,000 tons of hay, and 7,000 tons of cotton seed are annually produced; the orchard and garden products grown on about 2,000 acres, are valued at about $75,000, the entire annual crop of the county ranging in value between $750,000 and $800,000. Stock raising, while being an important and profitable business in this county, receives much attention, but is secondary to, and frequently part of, ordinary farming operations. There is much improved stock here, and the improvement is carried on from year to year. In 1897, according to the tax rolls, there were in the county, 16,918 head of horses and mules, valued at $319,531; head of cattle 24,977, valued at $162,737; head of jacks and jennets 128, valued at $7,390; head of sheep and goats 5,896, valued at $3,028; and head of hogs 12,031, valued at $13,553; the value of the whole being $506,239. The average taxable value of land in the county is $4.58 per acre, and improved lands are generally sold at prices



SHEEP RANCH, ERATH COUNTY.

ranging from $6 to $20 per acre. Unimproved lands can be generally had for $2 to $8 per acre. The assessed value of all property in the county in 1897, was $5,010,496, of which $2,977,543 was assessed against lands, $428,668 against town property, $506,239 against live stock, and $309,988 against railroads. The number of pupils enrolled is over 5,000, and the value of school property outside of the towns is about $25,000; 96 school houses are maintained by the county, and 115 teachers are employed.

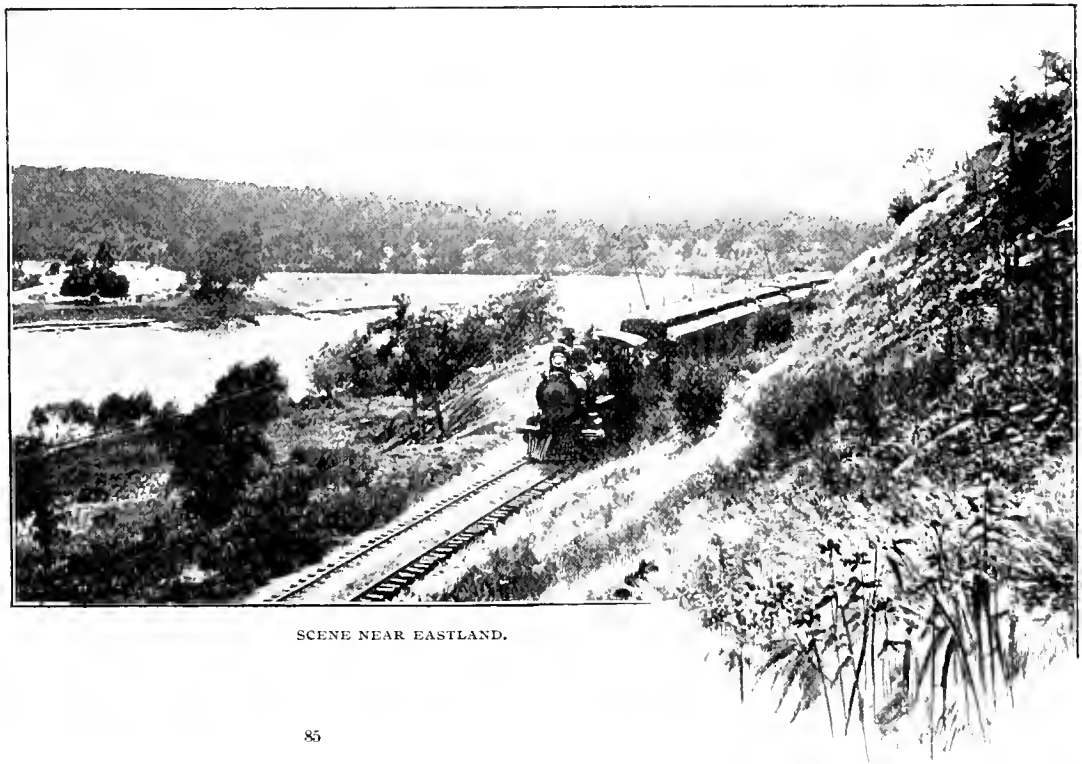
Stephenville, is the county seat, and has about 1,200 inhabitants. Dublin, at the junction of the Texas Central, and Fort Worth, and Rio Grande Railways, is an important trading point, and has about 2,500 inhabitants. Thurber, on the Texas & Pacific Railway, is the shipping point for the coal mines and county, and has 4,000 inhabitants. The other towns, Alexander, population 300; Bluffdale, population 200; Chalk Mountain, population 200; are considered good business points, and handle cotton, live stock, corn, wheat, oats, sorghum, wool, hides, flour, and other products of the county. The mercantile and manufacturing establishments in the county, outside of Thurber, consist of 1 bank, opera house, roller mills, cotton gins, cotton compress, street railway, electric light plant, water works, ice factory, candy factory, broom factory, 6 churches, etc., at Dublin; a steam roller mill, cotton gins, 4 or 5 churches, etc., at Alexander; steam flour mills, cotton gins, health resort, hotel and 4 churches at Duffau; 6 churches, 2 banks, 2 first-class hotels, a handsome court house, a flouring mill, cotton gins and newspapers at Stephenville.

EASTLAND COUNTY, TEXAS. This county was created in 1858 from parts of Coryell and Bosque Counties, and was organized in 1873. It was named in honor of Captain Wm. M. Eastland, who was murdered while a prisoner in Mexico. The area of the county is 909 square miles, and the population, in 1890, was 10,373, to which 30 per cent might now safely be added. Like in the adjoining counties, much of the surface of the county is broken and hilly, there being a diversity of soils, the chocolate colored loams, however, predominating. About two-thirds of the surface is timbered, there being large areas of post oak on the uplands, cedar in the broken lands, elm, pecan, cottonwood, etc., along the streams, and mesquite timber on the flat tablelands. The Leon River and its numerous

tributaries perform the drainage of the county, are running streams about half of the year, and carry water in holes in their beds sufficient for stock raising. For domestic use an abundance of freestone water is obtained from springs and wells, the latter varying in depth from 30 to 45 feet. The annual rainfall is 27 inches, generally well distributed throughout the growing season. The county is in every respect healthful, there being no stagnant waters or other causes for disease. The atmosphere is dry and bracing. The temperature ranges in summer from 75 to 95 degrees, and in winter from 20 to 60 degrees.

The principal occupations of the people are general farming, raising cattle for beef, and wool growing. There are about 1,500 farms in the county, not counting enclosed lands especially devoted to pasturage. The 65,000 or 70,000 acres in cultivation produce, annually, about 5,000 bales of cotton, and 3,000 tons of cotton seed, 150,000 bushels of corn, 30,000 bushels of wheat, 75,000 to 85,000 bushels of oats, 3,500 bushels of Irish and sweet potatoes, 1,000 tons of sorghum cane, and about 1,000 bushels of pecans, the crops varying with the season, price and condition of the market. Including the product of some 1,500 acres devoted to fruit growing and gardening, valued at say $10,000, the general crops of the county may be estimated as worth from $300,000 to $350,000.

Much of the county lies in the coal measures, and coal of good quality has been found, the same being mined in a small way. In time more extensive enterprises in mining may be undertaken. Good building stone is found in quite a number of places, also indications of iron ore and copper. Good brick and tile clays occur in many localities, but none have been, to any extent, developed.

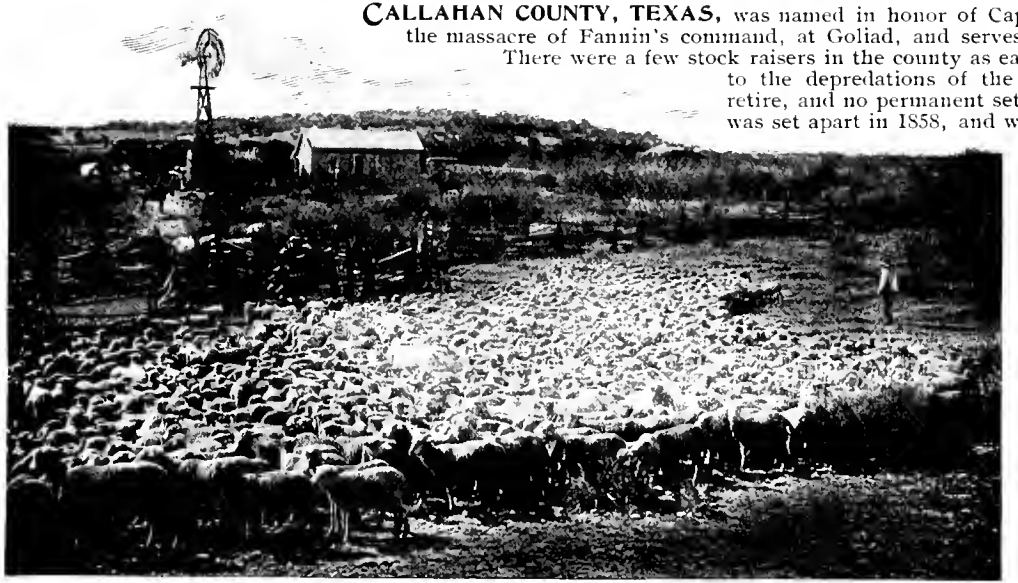


SCENE NEAR EASTLAND.

The live stock interest in the county is an important one, and in 1897, there were rendered for taxation 10,713 head of horses and mules, the same valued at $187,501; also 18,338 head of cattle, valued at $112,598; 129 head of jacks and jennets, valued at $5,586; 472 head of sheep and goats, valued at $268; and 6,805 hogs, valued at $8,736; the value of the entire live stock in the county being $314,689.

The county has 69 miles of railway, the Texas & Pacific Railway traversing the county from east to west, and the Texas Central Railway passing through it from southeast to northwest. At the crossing of the two railways is the town of Cisco, a lively trading point of about 2,000 inhabitants. Its principal exports are cattle, wool, hides, small grain, cotton, and other products of the county. About 10 miles east is Eastland, the county seat, a well-built town of about 1,000 inhabitants. This town and Ranger, population 700, are on the Texas & Pacific Railway. Desdimonia, population 500, and Jewell, population 250, are the other trading points in the county.

The taxable valuation for the county in 1897, amounted to $3,425,819, of which $2,313,864 were assessed against lands and town property, $314,689 against live stock, and $442,189 against railroads. 58 public schools are maintained, and 69 teachers are employed. The number of pupils enrolled is 2,708. Improved lands in the county are generally on sale at $5 to $20 per acre; unimproved farm lands at $2.50 to $5, and lands suitable for pasturage only, perhaps cheaper. The crops obtained, per acre, one year with another, are about the same as in the counties heretofore described.

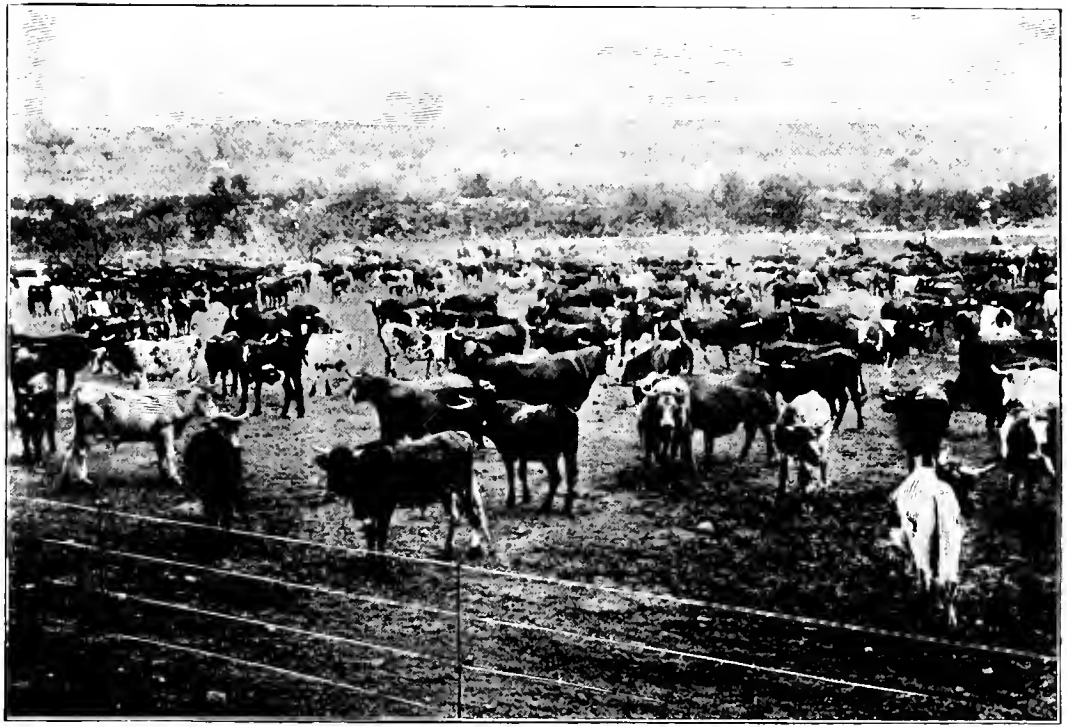


Callahan County, Texas, was named in honor of Captain James Callahan, one of the survivors of the massacre of Fannin's command, at Goliad, and serves as an enduring monument to his memory. There were a few stock raisers in the county as early as 1860, but, being continuously exposed to the depredations of the Indians, these pioneers were compelled to retire, and no permanent settlement was effected until 1874. The county was set apart in 1858, and was organized in 1877. It is situated near the geographical center of the State, has an area of 900 square miles, and, in 1890, it had 5,457 inhabitants, of whom about 1,200 are residents of Baird, the county seat, 500 of Putnam, a station on the Texas & Pacific Railway, and 100 each of Cottonwood, Belle Plain, and Cross Plains. Since 1890, there has been a considerable increase of population in the county, probably 30 per cent.

The surface of the county presents considerable diversity in the soils and topographical features. The eastern half has some of the characteristics of the coal region, while along the western boundary the general appearance is that of the "Plains Region," lying further west. The "divide" or watershed between the waters of the Brazos and of the Colorado Rivers runs through the

center of the county, from northwest to southeast, the highest elevations being 2,100 feet above tidewater. From this "divide" rise innumerable small water-courses, flowing northeast and southwest into one or the other of the rivers. The "divide" is also the line of separation of the post oak forests, "Upper Cross Timbers" from the prairie lands, which are, in places, covered with a scant growth of mesquite trees. The "Upper Cross Timbers" afford an abundant supply of post oak, fuel and some fencing. In the more broken parts of the "divide" are large cedar brakes, with trees of sufficient diameter to make fence posts.

About one-half of the area of the county is arable, the remainder affording good pasturage. The prevailing grass is the mesquite, which cures on the ground during August and September, and furnishes good stock food during the entire winter. The raising of cattle is carried on to a large extent as a distinct business, the prime object being to produce beef rather than dairy products. Cattle are generally raised on the open range, milk and farm stock only being regularly housed and fed. In 1897, there were in the county 10,055 horses and mules, valued at $130,061; 26,731 head of cattle, valued at $275,285; 86 jacks and jennets, valued at $3,042; 222 sheep and goats, valued at $195; and 2,884 hogs, valued at $4,024; the value of the entire live stock being $412,607.



The soils are of considerable variety, each of which is credited with certain advantages. The annual rainfall varies from 20 to 30 inches, and generally is timely, and sufficient to mature fairly good crops. Occasionally small grain crops are reduced in yield by lack of sufficient rain in March and April, but this is unusual. The highest summer temperature observed has been 106 degrees, and the lowest 4 degrees below zero; these extremes occurring rarely oftener than once in ten years.

The average yield of crops is of corn, 20 to 30 bushels per acre; wheat, 12 to 15 bushels per acre;

sweet potatoes, 100 bushels; sorghum syrup, 125 gallons; sorghum hay, about 4 tons. During exceptionally favorable seasons, from 90 to 120 bushels of oats, and 45 bushels of wheat have been made per acre. The number of farms devoted entirely to agricultural pursuits is about 500, comprising about 25,000 acres. The annual product is about 2,500 bales of cotton, 50,000 bushels of corn, 25,000 bushels of wheat, 50,000 bushels of oats; sorghum hay is grown extensively. The whole crop, including about $7,000 in garden and orchard products, can be valued at about $200,000.

Improved lands range in price from $5 to $15 per acre, and unimproved lands can generally be had at $2 to $5 per acre. The school population of the county numbers about 1,500, for whom the county employs 39 teachers, and maintains 37 school houses. The assessed value of property in the county is $2,694,914, of which $1,771,274 is assessed against real estate, $294,944 against railway mileage, and $412,607 against live stock.

There are several mineral wells, the waters of which are locally esteemed for the cure of scrofulous and cancerous diseases. The best known of these are at Putnam, a station on the Texas & Pacific Railway, and at Pecan, a small village south of the railway.

Baird is the principal town and county seat. It has 1,200 inhabitants, and is the division terminus of the Texas & Pacific Railway. Among its institutions are the railway repair shops, 2 hotels, a bank, a flour mill, several cotton gins, some 36 mercantile establishments, and a county newspaper. Most of the business buildings are constructed of limestone or sandstone, which is abundant in the neighborhood.

LANDS, PRICES AND TERMS OF SALE.

ANYONE who has read the foregoing pages can not fail to have observed that a newcomer in Texas can not well go amiss in his search for a suitable abiding place, though only a part of the State has been described. Those who should go to Texas are:

1. People who wish to engage in farming.
2. People wishing to engage in manufacturing enterprises.
3. People who wish to engage in stock raising.
4. People who seek an improvement in health and who may be benefited, either through climatic influences or by the use of the mineral waters, in which the State abounds.

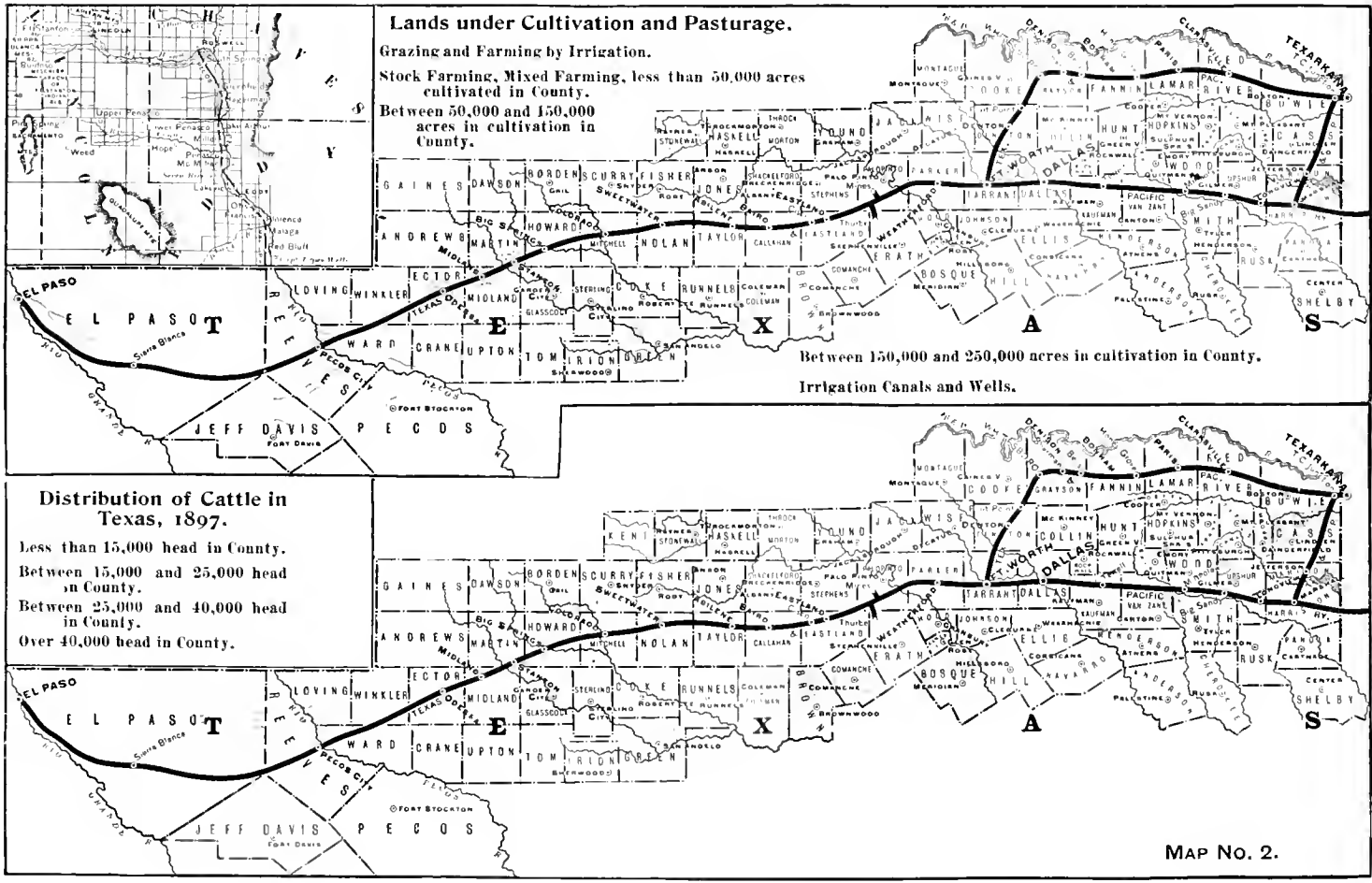
Of these, the visiting farmers and stock raisers are prospective land buyers. Such as prefer the woodlands of Eastern Texas, can purchase lands more or less improved, at prices ranging from $5 to $20 per acre. The present owners generally being willing to sell for part cash, a reasonable limit of time being allowed for deferred payments. Unimproved lands can be had for $2 to $5 per acre, from private owners. If there are State school lands, not valuable for their timber, they can be had at $2 per acre, on a 40 years' credit, the purchaser paying 5 per cent interest per annum on the deferred payments. In the Red River and Black Land Counties, improved lands are sold at prices ranging from $10 per acre to $40 per acre, according to location, quality and improvements. They are all private lands and terms are as agreed upon between buyer and seller. Unimproved lands sell from $5 to $20 per acre, and lie in the neighborhood of highly improved localities. Between the Colorado and Brazos Rivers, there is a greater diversity in the soils, and lands can be divided into agricultural and pasture lands. Improved farm lands are valued at $5 to $20; unimproved at $2 to $5. The improved lands are private holdings, and the terms of sale according to mutual agreement. The unimproved lands may be property of the State school fund, and these are sold at $1 to $2 per acre, on a 40 years' credit. If part of railway grants, generally at $2.50 to $3.50 per acre, on 5 and 10 years' credit, the annual interest being 6 per cent. Grazing lands, when suitable for no other purpose, will vary in price from $1 to $3 per acre, according to location, quantity and water supply. Much of the grazing land can be leased for a term of years, the annual rental being about $25 to $30 per section of 640 acres, but this rate of rental applies more particularly to State school and railway grant lands in the remote western counties, and the leases are granted for grazing only. The renting of improved farm lands is a different proposition. In the more densely settled counties of Eastern, Northern and Central Texas, there is a large amount of improved land for rent each year. In some cases, a money rental, varying from $2 to $5 per acre, is exacted, but generally, where the landlord furnishes the land and improvements only, and the tenant the teams, tools, seeds and provisions, the landlord receives from one-fourth to one-third of the crop and the tenant has the remainder. Where the landlord furnishes everything necessary to the making of a crop, except the provisions for the family of the tenant, the crop is usually divided between the parties. Such leases are generally made each year between August and October, possession usually being given to the new tenant on or about January 1st. Thousands of men in Texas, who are now independent, have secured their first foothold in the State in this way, and are now the owners of fine farms. Of course, it is more profitable for a man to buy land outright, if he has the means, and work his own farm, but in the absence of the necessary capital, the system of renting land for a share of the crop is an undoubted benefit to the new beginner.

On the irrigated lands of the Pecos Valley of Texas and New Mexico, and of the Rio Grande Valley, prices for lands vary from $15 to $50 per acre. With the purchase price of the land goes a perpetual water-right. An elaborate system of canals and ditches, comprising probably 2,000 miles, has been built by the several companies, and water is carried to every farm owning a water-right.

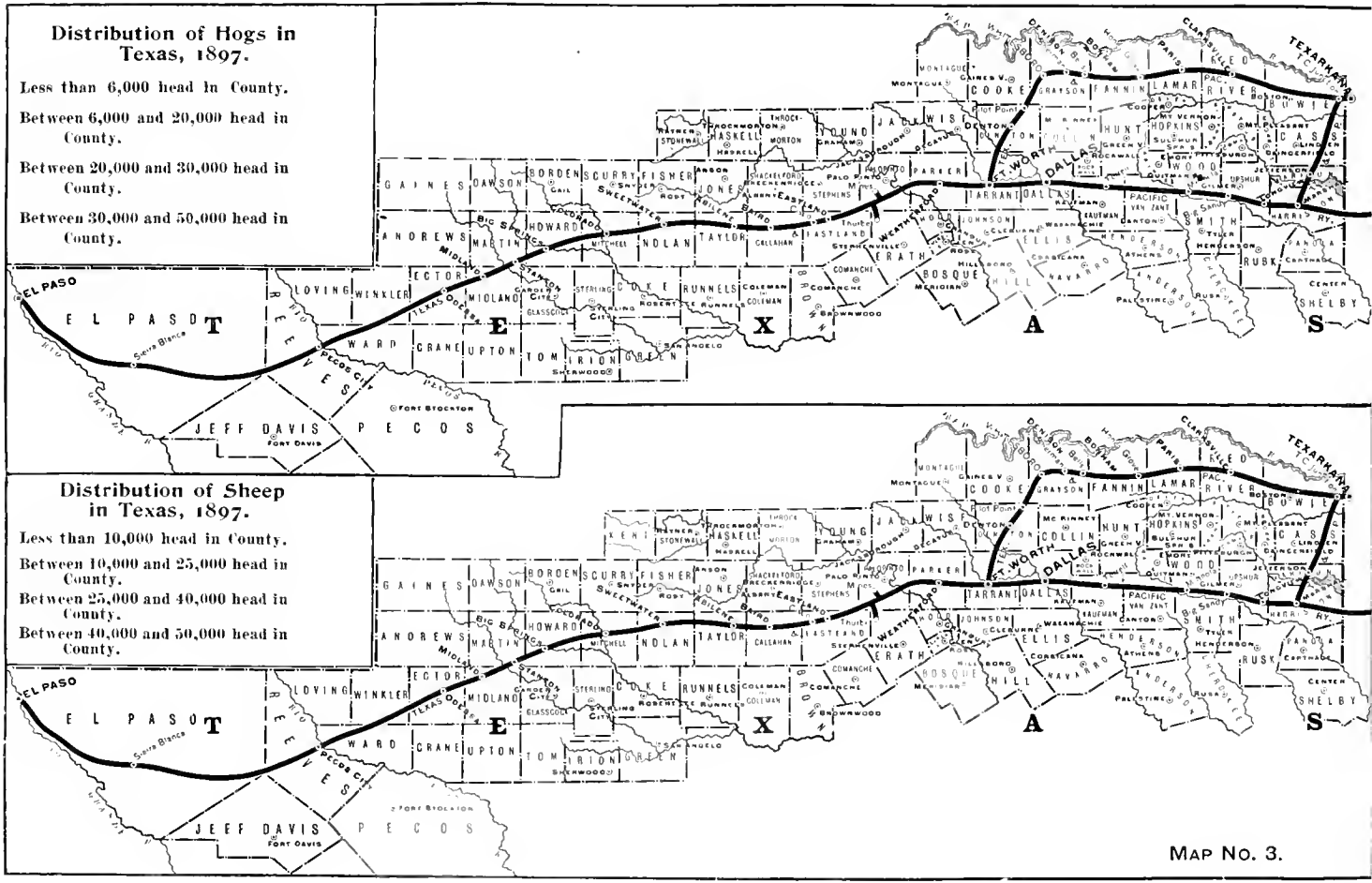
Usually, the lands are sold on 5 and 10 years' credit terms, the annual interest amounting to 6 per cent on the deferred payments. Irrigation canals, like any other improvement made by human hands, are liable to deterioration, and must be constantly kept in repair and be cleaned from time to time of water plants growing in them. The water must be delivered promptly to the farmers as they call for it, and men must be employed to attend to this. For this service, all irrigation companies charge an annual water rental, or water tax, varying from $1.00 to $1.50 per acre. Where a canal is owned by the farmers themselves, they must do the repair work and employ someone to distribute the water for them.

Outside of the irrigated areas, the land is suitable for grazing only. In Texas, it can be purchased and leased under the Texas State laws, where the lands are property of the State, or of the State school fund. Lands belonging to railroad grants are usually sold on 5 and 10 years' time, and can also be leased for grazing. These grazing lands are valued at $1 to $3 per acre. In New Mexico, along the Pecos River, all unappropriated lands are property of the United States Government, and can be acquired under the several land laws relating to homesteads, pre-emption, irrigation, etc. Information regarding Texas State and school lands can be had by addressing The State Land Commissioner, Austin, Texas; and in regard to the lands formerly embraced in the Land Grant of the Texas & Pacific Railway Co. (but now owned by Canda, Drake and Strauss), by addressing W. H. Abrams, their General Agent, in Dallas, Texas.

The remaining unsold lands of this Land Grant are situated in the following named counties in the quantities mentioned: Bowie, 13,095 acres; Red River, 4,377; Lamar, 24; Denton, 416; Rains, 2,435; Van Zandt, 1,334; Parker, 781; Collin, 17; Wise, 122; Palo Pinto, 11,708; Stephens, 11,613; Callahan, 9,733; Shackelford, 1,335; Jones, 12,423; Taylor, 25,850; Nolan, 38,345; Fisher, 9,914; Mitchell, 48,012; Howard, 95,727; Scurry, 316; Martin, 64,071; Midland, 212,044; Edwards, 11,520; Dimmitt, 4,893; Tom Green, 51,673; Borden, 6,402; Kent, 2,096; Dawson, 56,947; Coke, 7,219; Irion, 2,240; Sterling, 28,898; Glasscock, 188,308; Crane, 13,067; Upton, 90,016; Ector, 200,934; Winkler, 11,947; Andrews, 18,613; Loving, 95,680; Reeves, 308,358; Pecos, 124,063; Jeff Davis, 155,793; Presidio, 165,151; Brewster, 20,640; El Paso, 1,124,592.


Lands under Cultivation and Pasturage.
Grazing and Farming by Irrigation.
Stock Farming, Mixed Farming, less than 50,000 acres cultivated in County.
Between 50,000 and 150,000 acres in cultivation in County.
Between 150,000 and 250,000 acres in cultivation in County.
Irrigation Canals and Wells.
Distribution of Cattle in Texas, 1897.
Less than 15,000 head in County.
Between 15,000 and 25,000 head in County.
Between 25,000 and 40,000 head in County.
Over 40,000 head in County.
TEXAS
EL PASO
JEFF DAVIS
PECOS
REEVES
WARD
CRANE
UPTON
LOVING
WINKLER
ECTOR
MIDLAND
ANDREWS
MARTIN
HOWARD
MITCHELL
NOLAN
TAYLOR
CALLAHAN
FISHER
SCURRY
BORDEN
DAWSON
GAINES
JONES
SHACKELFORD
STEPHENS
THROCKMORTON
HASKELL
KENT
STONEWALL
YOUNG
ARCHER
WICHITA
CLAY
MONTAGUE
COOKE
GRAYSON
FANNIN
LAMAR
RED RIVER
BOWIE
CLARKSVILLE
TEXARKANA
WISE
DENTON
COLLIN
HUNT
HOPKINS
RAINS
WOOD
UPSHUR
MORRIS
CASS
MARION
HARRISON
PARKER
TARRANT
DALLAS
KAUFMAN
VAN ZANDT
SMITH
ANDERSON
HENDERSON
RUSK
PANOLA
SHELBY
JOHNSON
ELLIS
NAVARRO
FREESTONE
LIMESTONE
ROBERTSON
MILLS
HAMILTON
BOSQUE
HILL
CORYELL
BELL
COMANCHE
ERATH
EASTLAND
CALLAHAN
TAYLOR
JONES
SHACKELFORD
THROCKMORTON
HASKELL
KNOX
BAYLOR
WILBARGER
FOARD
HARDEMAN
COTTLE
KING
DICKENS
CROSBY
LUBBOCK
HALE
FLOYD
MOTLEY
DONLEY
COLLINGSWORTH
CHILDRESS
HALL
BRISCOE
SWISHER
CASTRO
PARMER
DEAF SMITH
RANDALL
ARMSTRONG
POTTER
CARSON
GRAY
WHEELER
HEMPHILL
OLDHAM
RANDALL
DEAF SMITH
PARMER
CASTRO
SWISHER
BRISCOE
HALL
CHILDRESS
COLLINGSWORTH
DONLEY
MOTLEY
FLOYD
HALE
LUBBOCK
CROSBY
DICKENS
KING
COTTLE
FOARD
HARDEMAN
WILBARGER
BAYLOR
KNOX
EL PASO
Sierra Blanca
Pecos City
Fort Stockton
Fort Davis
Big Spring
Colorado
Sweetwater
Abilene
Weatherford
Fort Worth
Dallas
Texarkana
Clarksville
Paris
Sherman
Denison
Bonham
Greenville
Terrell
Mineola
Tyler
Jacksonville
Palestine
Corsicana
Waxahachie
Cleburne
Stephenville
Brownwood
San Angelo
Sherwood
Iraan
Fort Stockton
Pecos
Toyah
Balmorhea
Marfa
Alpine
Marathon
Presidio
Ojinaga
Rio Grande
Pecos River
Concho River
Colorado River
Brazos River
Red River
Big Spring
Midland
Odessa
Stanton
Garden City
Sterling City
Glasscock
Coke
Runnels
Coleman
Robert Lee
Ballinger
Winters
Abilene
Anson
Hamlin
Sweetwater
Roscoe
Snyder
Colorado
Big Spring
Gail
Lamesa
Seminole
Brownfield
Tahoka
Lubbock
Plainview
Hereford
Dimmitt
Clarendon
Memphis
Quanah
Vernon
Wichita Falls
Henrietta
Bowie
Decatur
Gainesville
Denton
McKinney
Greenville
Paris
Texarkana
Mt. Pleasant
Sulphur Springs
Commerce
Greenville
Quitman
Gilmer
Jefferson
Marshall
Longview
Kilgore
Henderson
Carthage
Center
Nacogdoches
Lufkin
Crockett
Palestine
Athens
Cleburne
Granbury
Weatherford
Mineral Wells
Graham
Throckmorton
Haskell
Rule
Knox City
Benjamin
Crowell
Quanah
Childress
Memphis
Clarendon
Wellington
Shamrock
Pampa
Canadian
Borger
Amarillo
Vega
Hereford
Dimmitt
Plainview
Lubbock
Tahoka
Brownfield
Seminole
Lamesa
Gail
Snyder
Colorado
Big Spring
Sweetwater
Roscoe
Anson
Hamlin
Abilene
Weatherford
Fort Worth
Dallas
Texarkana
Clarksville
Paris
Sherman
Denison
Bonham
Greenville
Terrell
Mineola
Tyler
Jacksonville
Palestine
Corsicana
Waxahachie
Cleburne
Stephenville
Brownwood
San Angelo
Sherwood
Iraan
Fort Stockton
Pecos
Toyah
Balmorhea
Marfa
Alpine
Marathon
Presidio
Ojinaga
Rio Grande
Pecos River
Concho River
Colorado River
Brazos River
Red River

MAP NO. 2.


Distribution of Hogs in Texas, 1897.
Less than 6,000 head in County.
Between 6,000 and 20,000 head in County.
Between 20,000 and 30,000 head in County.
Between 30,000 and 50,000 head in County.
Distribution of Sheep in Texas, 1897.
Less than 10,000 head in County.
Between 10,000 and 25,000 head in County.
Between 25,000 and 40,000 head in County.
Between 40,000 and 50,000 head in County.
TEXAS
EL PASO
JEFF DAVIS
PECOS
REEVES
WARD
CRANE
UPTON
LOVING
WINKLER
ECTOR
MIDLAND
MARTIN
HOWARD
MITCHELL
NOLAN
TAYLOR
CALLAHAN
FISHER
SCURRY
BORDEN
GAINES
DAWSON
ANDREWS
COKE
RUNNELS
COLEMAN
BROWN
COMANCHE
EASTLAND
ERATH
BOSQUE
HILL
JOHNSON
TARRANT
DALLAS
ELLIS
NAVARRO
COOKE
GRAYSON
FANNIN
LAMAR
RED RIVER
DENTON
COLLIN
HUNT
HOPKINS
WOOD
SMITH
RUSK
HENDERSON
ANDERSON
SHELBY
CHEROKEE
HARRISON
MARION
CASS
BOWIE
CLAY
WICHITA
KNOX
THROCKMORTON
JONES
SHACKELFORD
STEPHENS
PALO PINTO
PARKER
WISE
JACK
YOUNG
CLAY
MONTAGUE
GRAYSON
FORT WORTH
DALLAS
TEXARKANA
SHREVEPORT
Midland
Stanton
Big Spring
Sweetwater
Abilene
Baird
Cisco
Weatherford
Fort Worth
Dallas
Texarkana
Sierra Blanca
Pecos City
Fort Stockton
Fort Davis
Sherwood
San Angelo
Sterling City
Glasscock
Robert Lee
Coleman
Brownwood
Stamford
Haskell
Rockmorton
Throckmorton
Albany
Eastland
Stephenville
Cleburne
Waxahachie
Corsicana
Athens
Palestine
Rusk
Center
Carthage
Tyler
Quitman
Gilmer
Jefferson
Marshall
Pittsburg
Mount Pleasant
Clarksville
Paris
Bonham
Sherman
Denison
Gainesville
Montague
Decatur
Bridgeport
Weatherford
Granbury
Cleburne
Mineral Wells
Graham
Seymour
Wichita Falls
Vernon
Quanah
Childress
Crowell
Benjamin
Knox City
Munday
Rotan
Roby
Anson
Hamlin
Sweetwater
Colorado
Big Spring
Stanton
Midland
Odessa
Monahans
Pecos
Fort Stockton
Fort Davis
Sierra Blanca
El Paso
Rio Grande
Pecos River
Brazos River
Red River
Trinity River
Sabine River
Neches River
Angelina River
Lake Texoma
Lake Whitney
Lake Waco
Lake Belton
Lake Stillhouse Hollow
Lake Georgetown
Lake Granger
Lake Somerville
Lake Limestone
Lake Fork Reservoir
Lake Tawakoni
Lake Ray Hubbard
Lake Lewisville
Lake Grapevine
Lake Arlington
Lake Worth
Lake Bridgeport
Lake Eagle Mountain
Lake Benbrook
Lake Granbury
Lake Whitney
Lake Waco
Lake Belton
Lake Stillhouse Hollow
Lake Georgetown
Lake Granger
Lake Somerville
Lake Limestone
Lake Fork Reservoir
Lake Tawakoni
Lake Ray Hubbard
Lake Lewisville
Lake Grapevine
Lake Arlington
Lake Worth
Lake Bridgeport
Lake Eagle Mountain
Lake Benbrook
Lake Granbury

MAP NO. 3.

Stock Raising in Texas.

THE pasture grasses of Texas consist of some 70 or 80 varieties, of which the curly, barbed and running mesquite, gramma and black gramma, wild oats, wild rye, sedge, bluestem, buffalo, bunch, crowfoot, and a dozen other varieties, are most common. Among these are a number which make excellent hay, and several, such as Colorado grass, rescue grass, wild rye, etc., are

CATTLE RANCH, WESTERN TEXAS

now cultivated. It was thought, for a time, that northern grasses could be grown for hay to advantage, but it was found that the grasses best suited for meadows in Texas were already here, vastly superior, for summer and winter grazing and for hay, to any that can be brought from other and colder climates, almost any piece of land, properly fenced, to keep out stock, for two or three years, will

show itself to be stocked with a dozen species of good grass for hay; it will, in fact, be a fine meadow. Wild hay, cut from the prairies, usually yields from ¾ to 1½ tons per acre, and sells at from $5 to $10 per ton.

The cultivated forage crops consist in the main of sorghum, yielding from 3 to 12 tons of hay; millet, cutting 1½ to 3 tons; rye and barley, cutting 1½ to 2 tons; Dhurra, Johnson grass and alfalfa. The last named is grown extensively in the irrigated regions, where it is used as a winter pasture and in summer is cut for hay. It yields from 5 to 8 tons per acre per annum, and is considered by those familiar with its uses, to be far superior to any other known hay. In eastern Texas, Bermuda grass has been planted extensively and affords excellent pasturage. Wild Japan clover, an intruder arriving within the past 20 years, is also prized as a valuable forage. Along the watercourses and in the lowlands is a growth of switch cane, which goes a long way when other green forage is scarce.

In the western counties, where the altitude is over 2,000 feet, the native grasses cure on the ground and are equivalent, during the winter months, to the best hay, and, in midwinter, cattle are generally in better condition than at any other time of the year.

The Bureau of Animal Industry recently published the following statement in regard to the numbers and values of live stock owned in Texas, on January 1st, 1898:

		Average value.	Total.			Average value.	Total.
Horses	1,148,500	$17 30	$19,866,178	Swine	2,826,302	$ 3 14	$ 8,874,588
Mules	265,349	30 96	8,214,550	Sheep	2,649,914	1 67	4,409,657
Milch cows	722,476	20 00	14,459,320	Cattle	4,823,295	15 27	73,639,656

Compared with other States, Texas stands first on cattle, fourth on sheep, third on swine, first on horses and mules, and seventh on milch cows.

The business of raising horses, cattle, sheep, and other live stock, has always been a favorite pursuit of the people of Texas. In the olden days, when the central part of Texas was thinly settled and farms were few and far between, and towns and transportation still further away, it was about the only business the population could safely engage in. Beyond the Brazos River, the Indians held undisputed sway, and people who valued their hides remained where there was easy communication with friends and neighbors. Cattle, of course, strayed beyond the line of safety and in time multiplied and increased, but escaped branding or mark of ownership. At a later time, when the Indians had been pushed further West, the settlers followed and took possession of the ownerless herds. A good branding iron was about the only capital required for the starting of a herd, and it laid the foundation of many a snug fortune. Up to 1880 there was no apparent necessity for owning pasturage and no outlay for lands. Since then, the farmer has occupied all the country east of the Brazos River and has crowded westward beyond the 101st meridian, bringing with him a change in the method of raising live stock, as well as new breeds of cattle. Farm cattle, such as milch cows and dairy stock generally, of the Hereford, Jersey, Holstein and Durham breeds, are found on the farms in great numbers, many farms being devoted to the raising of pure bred dairy cattle. On the ranges lying between the Colorado River and the Rio Grande, and extending north to the Indian Territory, the long-horned, raw-boned, light-weight animals have almost entirely disappeared. Nearly all of the cattle are graded, Hereford and Durham blood predominating. The 700-pound steer of 20 years ago has given way to an animal that weighs from 1,000 to 1,400 pounds. In the counties of the plains, west of the Colorado River, stock raising is conducted as a separate and distinct business, and is almost the exclusive pursuit of the inhabitants, the prime object being to produce a fine marketable beef. Farming is only incidental, the prime object being to produce a few vegetables and fruits for the kitchen and a great deal of forage for the cattle, to provide for possible contingencies. The live stock of the plains is expected to find its subsistence on the natural pasturage exclusively, and it is only for spells of extra cold weather, or for nursing cattle and ewes, that forage is provided. At the present time, the raising

of cattle is very profitable and stockmen feel sufficiently encouraged to secure, by purchase or lease, their permanent pastures, to provide an ample supply of water, either by means of wells and windmills or by building storage reservoirs, Forage is grown wherever possible, and beef cattle are fattened on the range. Where this is impracticable, they are sent to the farms in central Texas and then forwarded to the great cities, after being fattened on corn or cotton seed. Above all, though, no opportunity is neglected to secure pure bred bulls of the most valuable breeds, and it is a safe assertion to make that there are now on the Texas ranches more pure bred bulls than in any other State.

The raising of horses and mules is also a great industry in the State. In the western counties, the tough little ranch pony, or mustang, is yet predominant, but in central and northern Texas the Hamiltonian, Cleveland bay, Norman, Percheron and Clydesdale, are no strangers on the farms, and some of the finest racing horses in the United States have been raised on the Black Land farms of Dallas, Kaufman, Collin, Tarrant and Grayson Counties. Mules are raised by thousands, are generally large in size and are valuable.

The raising of sheep and growing of wool are industries more peculiar to western Texas than to the farming region. Texas produces more wool than any other State in the Union, except California and Ohio. As the flocks are increasing at the rate of 80 per cent, not including the importations, it is only a question of a short time before the State will ship more wool than any other. The expense of raising sheep is 30 per cent less than in Ohio, and wool brings the same price for the same quality. Sheep, in Texas, are expected to subsist entirely on the open range, both in winter and summer. About the only time in the year when feeding is done is when the lamb crop comes in, in spring, and the ewes need green forage to properly nurse their lambs, and this is only occasional. Sheep, at present, are worth from $3 to $4 per head. Being generally grazed on the high plains, in a dry atmosphere, there is virtually no foot-rot to contend with, and the rigid inspection and frequent dipping all flocks are subjected to, has practically done away with the scab disease. The French merino is the preferred wool sheep, Cotswolds and other strains being preferred for mutton. Angora and cashmere goats are raised in large numbers and yield a fair profit.

The hog is confined more particularly to northern, eastern and central Texas. West of the Brazos River, they are comparatively few, except in the irrigated regions. In the Woodland counties of eastern Texas, they are quite numerous. While high grade Poland Chinas, Chester Whites and Jersey Reds can be found on many farms, the old original razorback, which can outrun a race horse, climb a tree, or wriggle through a picket fence, is still a great favorite. He is the lazy man's hog, hustles for himself, and while always lean and hungry, costs the owner practically nothing. He runs at large in the woods, and when pork is wanted, he is hunted like any other game. In northern and central Texas, where the hogs are confined to the farms, and regularly fed and well taken care of, they are, as a rule, of good breed and will compare favorably with those raised in any other State. The preferred breeds are the Poland China, Berkshire, Jersey Red and Chester White. A great impetus was given to hog raising in Texas, by the establishment of extensive meat packeries in Dallas and Fort Worth, as well as by the increased demands of northern packeries. The various hog diseases, so much complained of in the Northern States, seem to be rare in Texas, owing probably to the more active outdoor life of the swine, which, owing to the mild climate, can, without damage, be kept in the open air all winter.

POULTRY RAISING does not receive the attention in Texas to which it is entitled. While the finer breeds of poultry have been introduced on many farms, the old barnyard stock still predominates. On account of the short and mild winters, it is an easy matter, with generous treatment, to induce the early hatched pullets to lay all winter, and it is also easy to hatch chickens in winter and get them ready for market early. The same will apply to ducks and geese. The raising of poultry is considered a business of minor importance and is greatly neglected, though, pound for pound, poultry meat can be raised for less than half the cost of either pork or beef, and generally sells at a higher figure.

Western Texas.

THE COUNTIES OF THE PLAINS. For the sake of convenience, rather than of geographical accuracy, that part of Texas lying north and south of the Texas and Pacific Railway, and west of the 100th meridian, or the west line of the "Upper Cross Timbers," is called Western Texas. It is the great stock raising region of Texas, a region of vast grassy plains, of varying altitude, extending from the "Cross Timbers" to the Rio Grande, and from the Indian Territory to the Republic of Mexico. Within its confines are the Colorado, the Pecos and Rio Grande Rivers, the largest streams in Texas, and on the two last named rivers are the most extensive irrigation works and the greatest irrigated acreage in the United States. From the "Cross Timbers" westward, are three tiers of prairie counties, as fertile as any in the State, having hundreds of fine farms and a large agricultural population. Among these should be counted Taylor, Jones, Nolan and Mitchell Counties. Beyond these, and lying between the Colorado and the Pecos Rivers, are the counties of Howard, Martin, Midland, Ector, and Winkler, devoted exclusively to stock raising. In the Pecos Valley, extending northward into New Mexico for 175 miles, and southward 50 miles from Pecos City, are great stretches of land provided with elaborated systems of canals for irrigation, and in the Rio Grande Valley are similar irrigated areas covering many thousands of acres.

Western Texas, as seen from the cars of the Texas & Pacific Railway, is a beautiful country. From the "Cross Timbers" to the Colorado, and from that stream westward for a distance of 90 miles, is a succession of grass-covered and almost treeless table-lands, terminating at the foot of the Great Staked Plain. Their surfaces are generally level, sometimes undulating, and are traversed by numerous water-courses and draws, shallow but continuous depressions, resembling old river beds and leading to running streams. At times they carry immense bodies of water, and again, for months the cattle fatten on the rank growth of grass growing in their beds.

The eastern and southern edges of these table-lands, which, at intervals of 10 to 15 miles, rise abruptly to higher levels, appear from a distance as bold, almost perpendicular bluffs, a few hundred feet in height, apparently perfectly smooth on top, and reminding one of immense fortifications. The last abrupt rise in level is the edge of the Staked Plain, 56 miles west of the Colorado River. Where crossed by the Texas & Pacific Railway, it has a width of about 65 miles; north of the railway it widens out like the leaves of a fan and is merged into the Panhandle. Its southern, eastern and western outlines are well defined, its edges consisting of rocky bluffs extending in a semi-circle for hundreds of miles. Once on top, its general appearance is that of a boundless ocean of grass, meeting the horizon in every direction.

From its base issue all the important rivers of Texas, except the Pecos and the Rio Grande, and on its surface are hundreds of river and creek beds, draws and depressions, which, further east and south, become flowing streams. After heavy rains, usually in May, June, July and August, nearly all its water-courses are running streams and its thousands of small lake beds are full to overflowing; but most of them are dry one-half of the year, as the porous soils of the Plain absorb immense quantities of water. Under the Plain are vast bodies of water, reached almost anywhere at a depth of 10 to 60 feet.

From the eastern border of the State to the Great Staked Plain, there has been a constant increase in altitude. At the railway crossing, at Brazos River, the country lies 750 feet above sea-level; at Strawn, in Palo Pinto County, 900 feet; at Cisco, in Eastland County, 1,625 feet; at Baird, in Callahan County, 1,700 feet; at Merkel, in Taylor County, 1,875 feet; at Sweetwater, in Nolan County, 2,175 feet; at Colorado River crossing, 2,075 feet; at Big Spring, in Howard County, 2,400 feet. As far as this point, the changes in elevation are abrupt, each change, in a measure, indicating the level of a plateau The Staked Plain is now reached and the increase in elevation is more gradual. At Stanton, in Martin County, it is 2,700 feet; at Midland, in Midland County, 2,780 feet; at Odessa, in Ector County, 2,900 feet, and at Douro, on the western edge of the Great Plain, 3,100 feet.

Westward, beyond the Great Staked Plain, and more than 500 feet lower, is the broad valley of the Pecos, extending from its bold western bluffs far beyond Toyah, a distance of over 60 miles. Standing on the rocky bluffs, through which the railway winds its way, by numerous turns, curves and twists, to the Rio Pecos, one can obtain a full view of a vast expanse of grass covered country, extending westward to the Davis and Guadaloupe Mountains, 70 and 90 miles away, and yet plainly visible. Near the western base of the Plain may be seen the white sand hills, glistening in the sun, a truly remarkable body of land, from 5 to 10 miles in width and 40 miles in length. It is a body of white quartz sand, rising into thousands of hills and ridges, from 10 to 25 feet high. Like the sand dunes of the Sahara, they are movable, shifting from place to place, where not held fast by the luxuriant vegetation. In the depressions between the hills are hundreds of lakes of the clearest and purest water in Texas, generally surrounded and protected by a growth of small willows, the tule grass, or cat-tail reed, of our northern water-courses. Large stretches are covered with a growth of dwarf oaks, mingled with luxuriant grasses, which afford most excellent pasturage. In these sand hills, game is still abundant, and blacktail and Virginia deer, antelope, peccaries, an occasional bear, wolves, coyotes, rabbits, quail and waterfowl, can be found by the sportsman who seeks them. In the bottom of this great valley, close to the Pecos River, and extending north and south for 200 miles, is a vast system of irrigation canals, supplying thousands of acres in a high state of tillage. At Pecos City, on Pecos River, the altitude above sea-level is 2,590 feet; 90 miles up stream, at Eddy, in New Mexico, it is 3,100 feet, and at Roswell, 75 miles further, it is 3,900 feet. Westward, beyond the Pecos River, the altitude rises rapidly, and long before the western extremity of the State has been reached, the railway has traversed the southeastern spurs of the Rocky Mountains, which here occur in detached mountain chains, rising abruptly from the great elevated tablelands. At Toyah, 20 miles west of Pecos City, the elevation above tidewater is 2,975 feet; at Antelope Station, 4,320 feet; at Carrizo Pass, 4,610 feet; at Sierra Blanca, 4,700, with mountains in sight, towering from 5,000 to 7,000 feet. From Sierra Blanca westward is a rapid descent to the Rio Grande Valley, with its orchards and farms, until El Paso, which lies 3,717 feet above tidewater, is reached.

THE SOILS OF WESTERN TEXAS. A more beautiful landscape than that of the plains of western Texas, can not be found anywhere. This country is not monotonous, for it is diversified at almost regular intervals by lines of abrupt bluffs, rising almost perpendicularly from the Plain, by broad and shallow valleys, through the center of which runs a water-course, fringed by a narrow border of dense timber. It is not absolutely level anywhere, but is the best drained country on earth. On the Great Staked Plain the vista is almost boundless. Turn which way you will and you fancy yourself in the bottom of a basin many miles in diameter. The horizon always appears higher than the point of observation. In front, behind, at each side, a vast ocean of grass, extending in an unbroken sod for hundreds of miles, and during the month of May a carpet of flowers of every hue and a hundred varieties. Under foot, the richest soil the sun shines on, and above, the purest atmosphere a man can breathe. The soil is an alluvial, without being a river bottom, and freshets and floods are unknown. Its red, chocolate and black loams are mixed with sand, to such proportion that the rainfall is quickly absorbed, and the muddy road, the bane of Eastern agricultural regions, is utterly unknown. The composition and porosity of the soil enables it to respond with almost magical quickness to the rays of the sun and the life-giving showers. It varies in depth from 1 foot to 50, and appears uniform in quality down to the water-bearing lime-rock beneath it.

The only drawback to agricultural pursuits in this splendid region is the scant and irregular rainfall peculiar to some parts of it. Between the Brazos River and the Colorado River, in which range are included the counties of Taylor, Nolan, Jones and Mitchell, the rainfall is sufficient for profitable agriculture, the average annual precipitation being over 24 inches. West of the Colorado River, the altitude increases rapidly, accompanied by a decrease in rainfall. On the Great Staked Plain, the rainfall averages annually 20 inches, falling principally in May, June, July, August and September, the winter months being generally very dry. In the Pecos Valley, the

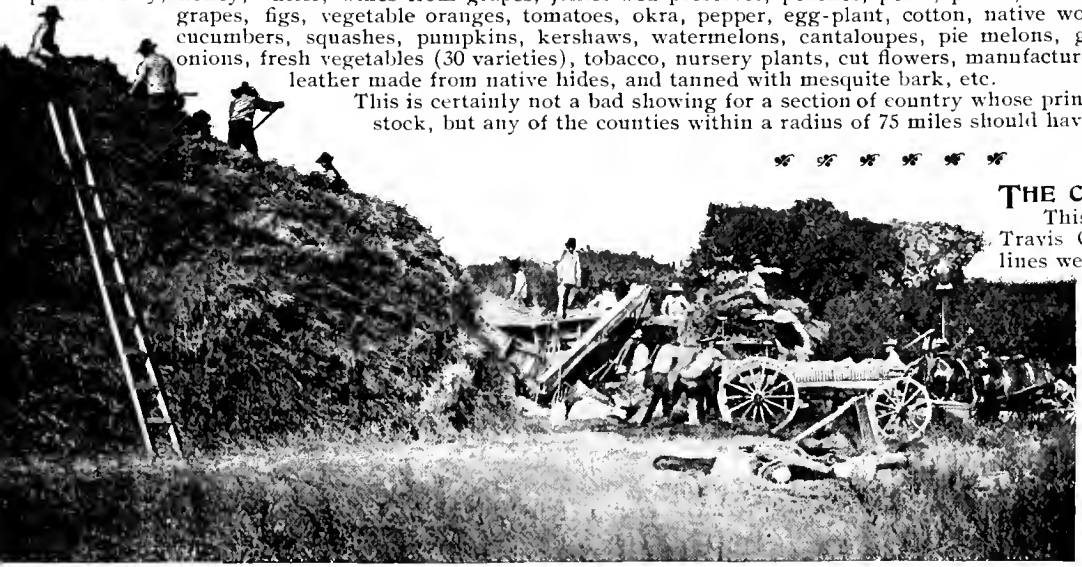
rainfall is about 17 inches, and in the Rio Grande Valley, about 15 inches. In the mountains, towering 6,000 to 10,000 feet above sea-level, the rainfall is nearly 50 inches, and in June, July and August, a shower can be seen from any given point every day.

West of the Colorado River, the rainfall is ample and sufficient to produce good pasturage, year after year, and to produce all the forage that will ever be required. As fine crops of cotton, corn, wheat, sorghum, vegetables, and fruits have been grown on the Great Staked Plain, without irrigation, as have been produced anywhere else, but it has been observed that the farmer who had the most cattle, horses, or sheep, and availed himself of the magnificent pasturage surrounding his farm, made the most money in the long run, and, in fact, every man engaged in stock raising in some form has prospered. The farmer who will come to this section prepared to own live stock, in considerable number, such as cattle, horses, mules, sheep, or angora goats, and will confine his farming operations to growing forage for his stock, cannot fail of success. The orchard and garden should not be neglected, for the well that supplies water for the stock will also supply water for 5 to 10 acres in fruit trees, grapes, and vegetables. The water for irrigation will not be needed often, but pays wonderfully well if you have it when you need it. On the plains of western Texas fruits of all descriptions yield remarkably. They are handsome, free from blemish of any kind, well flavored, highly colored, and absolutely free from insects or fungus ravages. The production of the commercial raisin grape, French prune, and every variety of fruit that can be grown in Southern California is easy and certain. The fancy table grapes of California, the raisin grape, pear, nectarine, peach, fig, plum, apricot, prune, quince, apples, grow vigorously, mature perfectly, and are found on many of the stock ranches. Orchards in these fruits, irrigated from windmills, are quite numerous in the vicinity of the towns of Midland, Stanton, Odessa, Big Springs, and Colorado. The climate of this region is a fit companion to the soil. Elevated and open, the pure air from the Gulf of Mexico, and from the mountains, sweep over it in gentle currents, ever refreshing, purifying, and cleansing. While persistent, the breezes are neither annoying nor inconvenient, except sometimes in March, when they raise more or less dust, these east winds generally lasting from an hour or two to 10 or 12 hours, and occurring three or four times during the month. There is nothing about them in the nature of a cyclone, and while occasionally annoying they are never dangerous. Owing to the perfect natural drainage of the country, there is not an acre of stagnant water in all of western Texas, and absolutely no local causes for malarial disease. The best evidence of the general healthfulness is in the fact that the annual death rate is only $9\frac{9}{10}$ persons per 1,000 population, while the natural increase is $44\frac{1}{10}$ persons per 1,000 inhabitants. Of the deaths 20 per cent are the results of consumption and pulmonary trouble, and of these all cases are imported. They are usually patients who came too late to be benefited by the otherwise favorable climate. The healthfulness of this great upland region is beyond all question. The porous character of the soil, the absence of malaria, the constant movement of the air, the hundreds of days of sunshine render it a sanitarium for those afflicted with lung, chest, or throat troubles. Thousands of persons have come to this region purely on account of health considerations, and have gained a new lease of life. Contagious diseases are of a mild type, and are less often fatal than elsewhere. There are no diseases peculiar to this region, and its death rate is the lowest in the world, though the region is visited annually by hundreds of invalids whose ailments are, at the time of their arrival, incurable. Water for stock and domestic purposes is found everywhere in the country east of the Pecos River, and is generally of good quality, and available in great abundance. The tributaries of the Colorado and Pecos Rivers afford an abundance of stock water, and where this is distant, reservoirs or tanks are constructed by building dams across water-courses. Good water for domestic purposes is obtainable in wells at a depth of 20 to 60 feet anywhere east of the Pecos River. West of this river the water supply has not yet been thoroughly explored, but wells are generally deeper, the depth varying with the location. The western slope of the Pecos Valley abounds in immense springs which form the head waters of some 10 or 12 of the tributaries of the Pecos River. At Pecos City there are 25 to 35 artesian wells from 150 to 250 feet in depth, and a like number are also at Roswell, New Mexico. At both places they are used for domestic purposes as well as for irrigation. Ordinary wells west of the Pecos River vary in depth from 50 feet to 150 feet, good water being generally obtained.

FARMING IN WESTERN TEXAS.

FARMING operations are carried on in western Texas, almost exclusively, in connection with stock raising, and the principal crops grown are the various kinds of forage. This statement applies, however, only to those localities where dependence is placed exclusively on the natural rainfall. In the irrigated regions of western Texas, where any kind of crop can be secured with absolute certainty, there is great diversity in the products grown. Between the "Cross Timbers" and the Colorado River, in the counties of Taylor, Nolan, Mitchell and Jones, the standard field crops of Texas are grown with success and profit, equal to the counties lying further east. As to the agricultural possibilities of these prairie counties, it should be said that at the Texas State Fair, the county of Taylor was awarded a premium of $500 for having the best and most complete display on the grounds, while competing against 18 other counties. The display consisted of wheat of all varieties, flour from Taylor County wheat, oats of all varieties, rye of all varieties, barley, buckwheat, sorghum of all varieties, corn, seven different varieties, German millet, Hungarian grass, Colorado grass, alfalfa, Johnson grass, broom corn, Milo maize, Kaffir corn, Dhurra corn, castor beans, mesquite beans, sumac, peas and beans of different varieties, pecans and peanuts, soil of Taylor County, 56 varieties of wild grasses, volunteer grass from farm, hay in bales, potter's clay, honey, butter, wines from grapes, jellies and preserves, peaches, pears, plums, wild and domestic; apples, nectarines, grapes, figs, vegetable oranges, tomatoes, okra, pepper, egg-plant, cotton, native woods, building stone, bricks, lime, cucumbers, squashes, pumpkins, kershaws, watermelons, cantaloupes, pie melons, gourds, Irish and sweet potatoes, onions, fresh vegetables (30 varieties), tobacco, nursery plants, cut flowers, manufactured articles, ladies' handiwork, and leather made from native hides, and tanned with mesquite bark, etc.

This is certainly not a bad showing for a section of country whose principal industry is the raising of live stock, but any of the counties within a radius of 75 miles should have made a similar showing.



THRESHING WHEAT IN WESTERN TEXAS.

THE COUNTY OF TAYLOR, TEXAS.

This county was formed from Bexar and Travis Counties, in 1858. The boundary lines were changed to the present limits in 1876, and in 1878 it was organized. Its area is 900 square miles, and in 1890, it had 6,957 inhabitants. The population has since then greatly increased. The general elevation of the county by actual measurement is 1,634 feet, though the highest of the mountain peaks rises 519 feet above the surrounding plains. The county is well watered. Though none of

PINE STREET, ABILENE, TEXAS.

the streams are large, they carry water the greater part of the year, and all hold water in pools in the dryest seasons. In the northern part of the county are many unfailing springs, and wells of good water are obtained nearly everywhere, at a depth of 15 to 35 feet.

While there is considerable variety in the soils, they are, without exception, fertile, and yield, one year with another, about as follows: Cotton, from one-half to 1 bale per acre; wheat, 15 to 35 bushels; oats, 40 to 100 bushels; barley and rye, 30 to 40 bushels; corn, 30 to 60 bushels; millet, frequently two crops per year, 2 to 6 tons; sorghum cane, 3 to 4 tons; Colorado grass, 3 to 5 tons; castor beans, 50 to 60 bushels; Milo maize, 30 to 100 bushels. There are about 600 farms in the county, comprising about 50,000 acres, and producing crops to the value of about $250,000. Fruit, such as peaches, pears, grapes, quinces, berries, mature to perfection, and are of fine flavor. A large plum, of fine flavor, and several varieties of grapes grow wild in sheltered localities. Vegetables are successfully grown, and melons attain extraordinary dimensions. The rainfall varies from 20 to 35 inches, most of it being precipitated between April and October. Summer crops—such as corn and cotton, sorghum, millet, any kind of forage—can be depended on to yield well. The cereals depending on early spring rains occasionally fail, but more frequently yield enormously.

The pasturage, as a rule, is excellent, consisting of curly mesquite, gramma and sedge grasses, and most live stock is raised on the open range, all year round, without other food. The live stock in the county, in 1897, consisted of 8,574 head of horses and mules, valued at $122,206; 18,242 head of cattle, valued at $148,659; 79 jacks and jennets, valued at $4,480; 6,706 sheep and goats, valued at $9,823; and 815 hogs, valued at $871.

The railway mileage in the county is $31\frac{1}{2}$ miles, belonging to the Texas & Pacific Railway, which traverses it from east to west. The assessed value of property, in 1897, is given at $4,228,444, of which $1,887,503 is charged to lands, $1,241,854 to town property, $262,626 to railroads, and $228,265 to live stock. Improved lands sell at prices ranging from $5 to $15 per acre. Unimproved lands can

be had at $2 to $5 per acre. The county maintains 26 school houses, employs 30 teachers, and has 1,081 pupils.

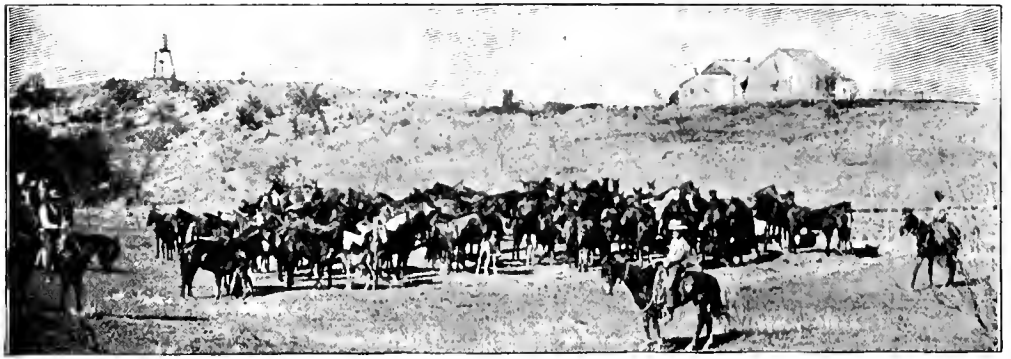
Abilene, the county seat, is an incorporated city, with 3,500 inhabitants, surrounded on all sides by attractive farms and ranches. It is the shipping point for a number of counties lying north and south of the Texas & Pacific Railway, and is 191 miles west of Dallas. It was first settled in 1881, and contains a number of fine church buildings, one of the best high schools in the West, a large, elegant public school building, a flour mill, grain elevator, several good hotels, an ice factory, 2 cotton gins, 2 corn mills, 3 national banks, water works, and a fire department, brick yards, opera house, and hundreds of attractive residence buildings. The business portion of town is built mainly of brick. The principal exports are cattle, wool, cotton and grain. The other towns of importance are Buffalo Gap, population 600; and Merkel, population 400.

ABILENE WATER-POWER.

NOLAN COUNTY, TEXAS. This county adjoins Taylor County on the west, and Sweetwater, its county seat, is 232 miles west of Dallas. Sweetwater, population about 1,500, is an important trading point on the Texas & Pacific Railway, its principal exports being cattle, wool, cotton and grain.

Stock raising is the engrossing pursuit of the population of the county, the cultivation of the standard crops being a secondary consideration. Fine crops of cotton, corn, wheat, oats, sweet potatoes, millet and sorghum are grown every year, but the preference is usually given to forage crops, such as sorghum, millet, Egyptian corn, Indian corn, Kaffir corn, Milo maize, or any plant which will make forage, and can be consumed at home. Garden vegetables yield very well in the summer months, and fruits leave nothing to be desired. The county is covered with a luxuriant growth of grass, and cattle and sheep are raised almost entirely on the range. Most ranches have small irrigated gardens attached, in which the finest of fruits and vegetables are grown. There are about 250 farms and gardens, comprising about 4,000 acres in the county, the product of which is valued at about $30,000.

The live stock in 1897, consisted of 5,204 head of horses and mules, valued at $59,300; 14,010 head of cattle, valued at $143,581; 165 jacks and jennets, valued at $4,980; 7,535 sheep and goats, valued at $9,339; and 1,013 hogs, valued at $1,366.



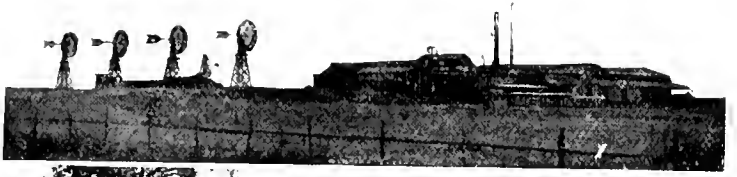
ROUND-UP—HORSE RANCH AT SWEETWATER.

The county was formed from Bexar County, in 1876, and named in honor of Philip Nolan, the great pioneer and scout, who explored Texas in 1800. It has an area of 900 square miles, and was organized in 1881. The elevation of the county is from 2,000 to 2,500 feet above sea level. Good water, in wells from 25 to 40 feet deep, is found in nearly all parts of the county except the south-central portion, where it is unpalatable.

The assessed values of property for 1897, are given at $1,799,504, of which $1,053,925 is assessed against lands, $98,189 against town property, $242,938 against railroads, and $218,566 against live stock. The school population is 500, the number of school houses 10, and number of teachers employed 12. Unimproved lands can be had at prices ranging from $2 to $5 per acre.

MITCHELL COUNTY, TEXAS. This county was organized in 1881, and is situated near the 32d degree of north latitude, and 101 degrees of west longitude. Colorado, the county seat, is 262 miles west of Dallas, by way of the Texas & Pacific Railway, which traverses the county from east to west. The general elevation of the county is about 2,000 feet along the east boundary, and about 2,400 feet along the west boundary. An abrupt change in the level takes place along the Colorado River, one of the three large rivers in the State. This stream flows through the center of the county, its general course being north and south. Like all other counties in the vicinity, it has very rich, fertile soils, chocolate colored, red, and black loams prevailing, though there are also areas of black waxy soils, and red clays. Johnson grass, millet, sorghum cane, Dhurra, Kaffir corn, are grown for forage year after year. When the ground has had a sufficiency of winter rains, Indian corn, oats, barley, cotton, alfalfa, vegetables and fruits are also grown. Stock raising is the engrossing business of the people, and all farming operations are made subject to the needs of the stock.

Irrigation from wells by means of wind-mills and tanks is practiced in a small way on most ranches, and an abundant supply of vegetables and fruits is thus secured. The annual rainfall is about 24 inches, and falls principally between April and October. About 2,000 acres are in cultivation, the remainder of the area being devoted entirely to stock raising. Curly mesquite, buffalo, and gramma grass are the prevailing grasses, and where land is fenced and the pasturage preserved for winter use, cattle and sheep will keep as fat as on any farm where grain is regularly fed. In the last few years, most stock men have secured permanent ranges, securely fenced



VIEWS IN COLORADO CITY AND VICINITY.

1. Texas Salt Company.
2. Lone Star Salt Company.
3. Ranch Scene.
4. Scene.
5. Residence Judge Looney.
6. Public School.

STOCK FARM—MITCHELL COUNTY.

in, and have reduced the herds, replacing them by far better breeds. There are more stock raisers and smaller herds, but, in the aggregate, more cattle of greater value in the county. The natural increase, annually, is from 50 to 75 per cent.

The number and value of live stock, in 1897, was as follows: Horses and mules 3,362, valued at $49,189; cattle 21,236, valued at $215,954; jacks and jennets 9, valued at $650; sheep and goats 16,308, valued at $16,966; hogs 393, valued at $660. About 25,000 sheep are sheared annually, near Colorado City, the shipping point, and about 200,000 pounds of wool are exported.

Colorado City is the county seat, and the banking point for a very large scope of country. It has extensive stock yards, and all other facilities for the quick and easy handling of the thousands of cattle that are exported from this point. The available banking capital is over $250,000. Of the 3,000 inhabitants of the county, about 2,000 have their residence in Colorado. Nearly all business buildings are built of brick, along well graded streets. The residence portion has many attractive private houses, surrounded by trees and shrubbery. Church and school buildings are roomy and handsome, and the county court house is an unusually commodious and well-built structure. The most extensive salt works in the State are located here, and among the local institutions are a fine club house, an electric company, ice factory, gas works, water works, and several smaller local enterprises peculiar to a well established town of its age and population. As in the surrounding country, the climate is delightful, both in summer and winter, and for people suffering from pulmonary troubles there is a promise of relief, if not cure. The hotel accommodations are fairly good, and the charges are moderate.

The area of Mitchell County is 900 square miles. The assessed values, for 1897, amounted to $1,706,665, of this $612,197 was assessed against lands, $289,021 against town property, $250,390 against railways, and $283,419 against live stock.

THE PASTORAL COUNTIES OF WESTERN TEXAS.

THE COUNTIES OF HOWARD, MARTIN, MIDLAND, ECTOR AND WINKLER. The general description of the Staked Plain contained in the preceding pages, applies so fully and accurately to each of the above named counties, that a specific description of any one of them becomes unnecessary. In all of them, the raising of cattle, horses and sheep is almost the exclusive business of the inhabitants. Once or twice during each decade, there is a rush of agricultural homeseekers to these beautiful and fertile lands, and new farms are opened up. In the run of a few years, these new-comers have all become stock raisers, or have gone to more promising agricultural districts. The man with live stock has prospered; the man depending exclusively on agricultural operations, has not greatly profited thereby. Nearly every stock man has some land under cultivation, but what farming there is, is solely for home consumption. Irrigated gardens are very numerous, both near the towns and on the ranches, and good things to eat are found on every ranch table.

SHEEP RANCH—MARTIN COUNTY.

HOWARD COUNTY. Organized in 1882, and present population about 2,500, of whom 1,800 are residents of Big Spring, county seat and division terminus of the Texas & Pacific Railway. The town is well built, has many substantial business houses, a national bank, a handsome and commodious court house, the railway shops, a good school, a fine large railroad hotel and a good system of water works. It is a good shipping point for cattle, hides and wool, the exports of the latter commodity frequently reaching 1,000,000 pounds per annum. The county has an area of 900 square miles, nearly all of which is devoted to the raising of live stock, the few isolated farms forming an exception to the rule. The altitude is 2,400 feet

above sea-level at Big Springs, and 2,800 feet at the west line of the county. The property valuations for 1897 amounted to $1,173,371, consisting of real estate valued at $541,104; railways valued at $275,275; 2,743 horses and mules, valued at $33,060; 14,641 head of cattle, valued at $146,525; 28 jacks and jennets, valued at $560; 7,000 head of sheep, valued at $8,750, and 480 head of hogs, valued at $1,040. About 2,000 acres are in cultivation, producing annually a value of about $15,000.

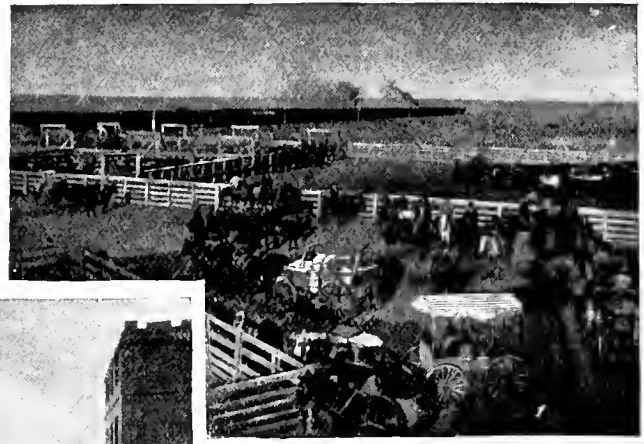
VINEYARD IN MIDLAND COUNTY.

MARTIN COUNTY lies on the eastern edge of the Great Staked Plain, and has an average altitude of 2,850 feet above tide-water. The area is 900 square miles, and the population about 500, all of whom are engaged in raising live stock. Farming operations are confined almost entirely to raising forage for live stock, and the acreage in cultivation is limited. There are a number of fine irrigated orchards and vineyards, as well as truck gardens, in the county, but these are generally part of larger cattle or sheep ranches. Water must be provided for the stock, and the wells that furnish the water for the stock also furnish such as is needed on a 5-acre or 10-acre orchard. The general valuations of property in the county (1897) amounted to $599,634, of which $335,481 was assessed against real estate, and $145,120 against live stock, of which there were 666 head of horses and mules, 13,793 head of cattle, and 750 head of sheep. About 30,000 head of sheep are sheared annually in the county yielding about 200,000 pounds of wool.

Stanton, the county seat, is the only town in the county, and is a station on the Texas & Pacific Railway. It has about 200 inhabitants, several mercantile establishments, 1 public school, with 60 pupils and 1 teacher, a Catholic theological seminary, and a Catholic female school of the higher grades.

MIDLAND COUNTY is the most populous county on the Staked Plain. It is traversed by the Texas & Pacific Railway for a distance of 26 miles. Its surface presents 900 square miles of nearly level grass covered plain. Though devoid of running streams, it is one of the best watered counties in the State, most excellent water being found everywhere, at a depth of 20 to 30 feet. Ample use is made of this water, and it is doubtful if there is another county in the United States that has so many wells and wind-mills to the square mile as has this county. The population is about 2,500, of whom 1,500 reside at the town of Midland, the county seat. As in the neighboring counties, stock raising is almost the exclusive business of the inhabitants. Large quantities of forage are grown, but these are used entirely at home. Nearly all the pastures in the county are enclosed, and nearly all ranches have orchards and gardens attached, the water for irrigating them being derived from wells and wind-mills. The county has a fine public school building, in which are employed 6 teachers, and instruction is given to 303 pupils. The property rendered for taxation in 1897 was valued at $1,132,975 and consisted of lands valued at $313,773, town property valued at $198,235, railroad property valued at $168,032; 1,463 horses and mules, valued at $17,055; 20,548 head of cattle, valued at $220,750; 1,500 head of sheep, valued at $1,850, etc. Most of the flocks of sheep are grazed in 10 or 15 surrounding counties, and about shearing time are brought as near as possible to the shipping points. The number of sheep sheared in the county was 77,450, and the quantity of wool obtained and exported was 725,300 pounds.

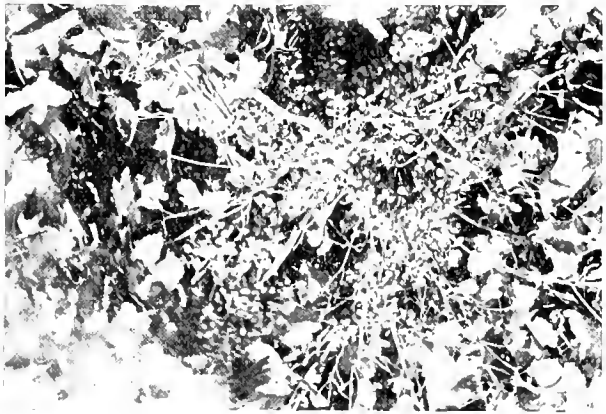
The town of Midland is 340 miles west of Dallas, and is a growing commercial center, being the banking and supply depot for an immense scope of country. It is second to none in the State as a cattle-shipping point, and its wool exports reach over 1,000,000 pounds per annum. It is the trading point and shipping station for all the large ranches lying north, south and west, for a distance of 150 miles, and it has ample banking facilities for an enormous business. Its stock yards are extensive and well arranged. The town is neat in appearance, thrifty and well built, carrying with it the evidence of permanent investment. It has 4 church buildings, a commodious school building, a bank, 3 newspapers, a court house, 2 good, roomy hotels, and a large number of well established business houses. The town covers an area of about a square mile, and nearly all residences



VIEWS IN MIDLAND.

1. Stock Yards, Midland.
2. Street Scene, Midland.

are surrounded by small, but very fine orchards, vineyards and gardens, which are irrigated from a forest of wind-mills and tanks of every make and design, there being not less than 400 in daily use on the town-site alone. The fruits and vegetables grown are most excellent in quality, and would find a ready sale in any market. Among the fruits are the finest of European table grapes, Asiatic plums, pears, apples and peaches. Celery and onions, as well as sugar beets, yield splendid results and could be profitably grown. The climate is most favorable to the relief and cure of asthma, catarrh, consumption, etc., and Midland is a favorite resort among people suffering from these ailments. The hotel accommodations are in every respect good, and the charges moderate.



MUSCAT RAISIN GRAPES, MIDLAND, TEXAS

FRENCH PRUNE ORCHARD, MIDLAND, TEXAS.

ECTOR COUNTY adjoins Midland County on the west, and lies on the highest part of the Great Staked Plain, where it is crossed by the Texas & Pacific Railway. Its altitude above sea-level varies from 2,900 to 3,100 feet, its annual rainfall being from 20 to 24 inches, sufficient to produce forage in any desired quantity. The raising of live stock is the exclusive business of the inhabitants, who number about 500. As in the adjoining counties, forage is grown for home use, and small but fine orchards and gardens are found on most ranches. The property valuations for 1897 amounted to $699,575, of which $246,299 was assessed against railway property, $310,675 against real estate, and $120,840 against live stock, which consisted of 1,034 head of horses and mules, 15,288 head of cattle, 1,700 head of sheep and 45 head of hogs.

Odessa, the county seat and only town, has about 200 inhabitants, a school with 42 pupils, a hotel, several mercantile establishments and wool warehouses. The exports are cattle, of which considerable numbers are shipped, about 150,000 pounds of wool and hides. It is a good local supply point for the surrounding ranches.

WINKLER COUNTY lies on the western edge of the Staked Plain. It is not organized, but has probably 100 inhabitants, all stock raisers. The highest point in the county is Douro Station, 3,100 feet above tide-water. The sand hills, mentioned in the preceding pages, are in this county, but lie 500 feet lower. Large quantities of canaigre root, a wild-growing tanning material, are annually gathered in these sand hills, and are exported to Europe. Some deer, an occasional bear, peccaries, a species of wild musk-hog, foxes, wolves and smaller game, are said to be still abundant in the sand hills. The county is fairly well stocked with cattle and sheep, but their numbers or values are not known to the writer.

North and south, for a distance of a hundred miles or more, from the Brazos River to the Pecos River, are other counties with the same resources and climate as the county north or south of them, described herein, the differences, if any, being in the distance from railway transportation, a thinner population and, perhaps, in some counties, cheaper lands.

SCENE NEAR ODESSA.

THE PECOS AND TRANS-PECOS COUNTRY.

WARD, REEVES AND EL PASO COUNTIES, TEXAS; EDDY AND CHAVES COUNTIES, NEW MEXICO. These counties, in many of their general characteristics, resemble the counties of the Staked Plain. The differences, however, are

SUGAR BEETS IN UPPER PECOS VALLEY.

well marked. The altitudes of the plains, or table-lands, vary from 2,580 to 6,000 feet, and about midway between the Rio Grande and Rio Pecos are several mountain ranges and detached spurs of the Rocky Mountains, which are from 2,000 to 4,000 feet higher.

Running streams flow through this region, and from them water for irrigation is obtained in abundance. Excepting a narrow strip of land close to the banks of the various permanent water-courses, along which irrigation canals have been built, and a few limited areas in the mountains, in which mining developments are carried on, the whole vast stretch of country is devoted to the raising of live stock. Of the whole area, probably not exceeding 2 per cent is irrigable, when all the necessary canals shall have been built, yet, in the aggregate, the irrigable acreage will exceed a million and a half acres. Away from the rivers, the raising of cattle, horses and sheep is the principal occupation of the inhabitants, excepting those engaged in developing the mineral resources in the mountains.

The live stock interests of El Paso County, and the several counties along the Pecos River, in Texas, in 1897, amounted to $1,019,772, and were distributed as follows:

El Paso County, Texas.— Horses and mules, 3,624 head, valued at $56,900; cattle, 17,688 head, valued at $156,175; sheep, 3,980 head, valued at $5,510; hogs, 390 head, valued at $1,035.

Ward County, Texas.— Horses and mules, 648 head, valued at $13,245; cattle, 2,523 head, valued at $26,135; sheep, 3,800 head, valued at $5,700; hogs, 634 head, valued at $1,627.

Reeves County, Texas.— Horses and mules, 3,261 head, valued at $48,055; cattle, 20,170 head, valued at $203,335; sheep, 16,325 head, valued at $24,437; hogs, 1,457 head, valued at $3,586.

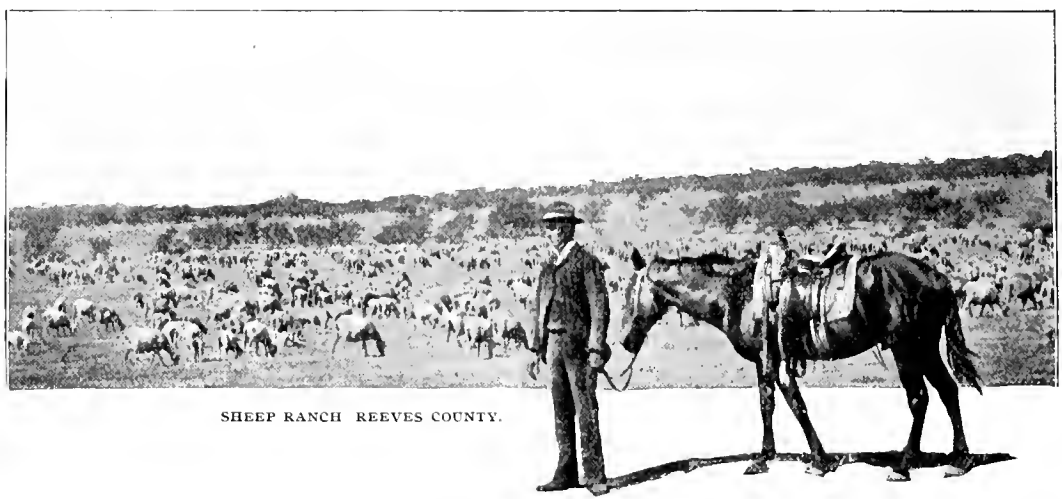
Pecos County, Texas.— Horses and mules, 3,573 head, valued at $34,211; cattle, 40,726 head, valued at $346,779; sheep, 72,007 head, valued at $89,962; hogs, 369 head, valued at $900.

Loving County, Texas, is not organized. It has several thousand head of horses and cattle, and several large flocks of sheep.

SHEEP RANCH NEAR BARSTOW, WARD COUNTY.

Eddy and Chaves Counties, New Mexico, have each about 6,000 head of horses and mules, and from 25,000 to 40,000 head of cattle, about 10 per cent of which are milch cows. The number of sheep in the two counties will approximate about 60,000 head, and of hogs, there are between 3,000 and 5,000 head.

Owing to a general depression in the live stock business, in 1894, 1895 and 1896, common throughout the whole United States, the renditions of live stock, in Texas, have been given in at extremely low values. The valuations quoted in this pamphlet apply to the 1st of January, 1897. Since that date, values of live stock have doubled and trebled in Texas, and the renditions of 1898 will show an enormous increase in values.



SHEEP RANCH REEVES COUNTY.

IRRIGATION.

FARMING in the Trans-Pecos country is carried on exclusively by irrigation, and is confined to the valleys of the Pecos and Rio Grande Rivers, and of Limpia, Rock, Toyah, Cedar, Alamito, Leon, Delaware, Todilla, and other creeks in Texas, and Black River, Peñasco, Felize, North and South Spring Rivers and Rocky Arroya in New Mexico. In the mountains are numerous small supplies of water which are also practically used for irrigation. In the vicinity of Pecos City, Texas, and of Roswell and Hagerman, New Mexico, are abundant supplies of artesian water, found at a depth of 200 to 300 feet, some of the wells being capable of irrigating a quarter section of land. On the Staked Plain, and also in the Trans-Pecos country, where water must be obtained from ordinary wells, and windmills are in common use, small patches of ground, varying from 1 to 10 acres, are irrigated from these sources of supply, and afford much of the comforts of life to the residents of many isolated ranches, who thus obtain their fruits and vegetables for home use. From nearly all of the rivers and smaller streams above mentioned, canals are carried to the alluvial soils in their immediate valleys, which, under intelligent cultivation, produce enormous crops. The mode of getting water on the land is based on the fact, that water will run in two directions in the valley of every running stream. A canal, having a fall of say 18 inches, or 2 feet, to the mile, in order to be kept at this grade, would recede further and further away from the stream, as it was extended down stream. If the river has a fall of 7 feet to the mile, and the canal a fall of 2 feet per mile, the end of a canal 20 miles long would be about 100 feet higher than the water in the river at the same distance in a straight line. The end of the canal would be several miles away from the river itself, and the land lying between the canal and the river can be irrigated because the canal lies above it. From such a canal are built smaller canals, called laterals, which are connected with still smaller canals and ditches, which convey the water to the farms. The actual application of water to the crops is accomplished by either flooding the land as with grain or forage crops, or by running the water in furrows, when fruit trees, corn, cotton, sugar beets, vegetables, etc., are irrigated. The process is very simple and readily understood when once seen. The number of times and the proper time to irrigate is determined by the character of the soil and the condition of the crops, and the only competent judge of these matters is the man who cultivates the crop. The cost of applying water is from 10 cents to 12½ cents per acre each time, it being estimated that one man can readily irrigate 10 acres per day, and that his labor is worth from $1 to $1.25 per day. The objects accomplished by irrigating a farm are, first, to fertilize it, as the waters of all flowing streams carry more or less fertilizing matter, which is washed into them from the lands through which they flow. It is estimated that from 5 to 10 tons of natural fertilizers are put on each acre each year in the course of its irrigation. In other words, the irrigating farmer gradually converts an upland farm into bottom land by irrigating it, in the same way that Nature would do the job by flooding lowlands in time of high water. The second object is to secure a full crop, that is to say, to secure all the land is capable of producing. To do this, the plant must have all the food it can consume. The plant food must be in liquid form and for this, water is necessary. The amount of water necessary to produce 1 pound of wheat and 2 pounds of straw, is about 2,000 pounds, all of which is absorbed and evaporated by the plant in the course of its growth and maturity. Whenever the quantity of water supplied to a crop is less than the quantity needed for the perfect growth of a plant, a diminished yield is the invariable result. By giving water when the plants need it, the farmer secures and maintains a vigorous growth, and vigorous parents beget numerous and healthy offspring.

The greatest crops produced by irrigation, in the United States, have been 113 bushels of wheat to the acre, on a farm near Helena, Montana, in 1876; 1,000 bushels of potatoes to the acre in the St. Louis Valley, Colorado; 15 tons of cured sorghum hay at Pecos City, Texas; 800 bushels of onions, at the same place; 8½ tons of cured alfalfa hay, at Roswell, N. M.; 100 bushels of oats, at Pecos City, Texas; 25 tons of sugar beets, at Roswell, N. M., etc., etc. The average crops on irrigated lands will run about 30 bushels of wheat, 45 to 65 bushels of Indian corn, 300 to 500 of onions, 4 to 6 tons of alfalfa hay, 10 to 15 tons of sugar beets, etc., but

A TEXAS CORNFIELD

these can be counted on year after year, for, with the irrigating farmer, the element of chance is almost entirely removed. The farmer who depends exclusively on the rainfall, does not always get it when his crop needs it, and, therefore, he frequently has weak plants and diminished yield to contend with. In an irrigated country the oldest farm is the richest and brings the highest price. Where the rainfall is depended on exclusively, the natural fertilizers in the soil are, in time, consumed, or washed away, and must be replaced by artificial manuring in order to maintain its producing capacity. The cost of maintaining such land detracts from its value. Very little time is lost on an irrigated farm. A farm can be made ready for plowing in 24 hours, and 2 and sometimes 3 crops can be produced on the same piece of land in the same season.

FARMING IN THE RIO GRANDE VALLEY.

IN this valley agricultural operations have been carried on for probably five hundred years. The first Spanish explorers found the valley well populated by agricultural Indians, who relied more for their subsistence on their crops, than on the chase. A considerable number of towns dotted the valley, and around each existed a primitive but effective system of irrigation canals. Cotton was raised by the Indians, who were expert weavers, and corn, beans, pumpkins, squashes, and some native fruits constituted their food crops. Whether or not the sweet potato was grown is undetermined, though it was well known in southern Mexico and Central America. The Irish potato still grows wild in the mountains of New Mexico. Wild tobacco, and a species of wild flax, still grow in the Davis Mountains, in Reeves County, Texas, but whether the Pueblo Indians cultivated them is not known. The art of making an intoxicating drink from the tuna cactus, and from several kinds of magney, was no mystery to them. With the Spanish invasion came the introduction of alfalfa, wheat, barley, oats, Spanish grapes, pears, and other fruits; Spanish onions, cabbage, turnips, and other vegetables common to Europe. With them came also the various domestic animals.

At the present time all varieties of grain, Indian corn, forage plants like alfalfa and sorghum, northern, southern, and semi-tropical fruits of the best varieties, vegetables of every description, and tobacco of a superior quality are grown in this valley with great success. The grape, plum and pear, apple and quince, are the staple fruits, and climate and soil seem to be particularly favorable to their growth. The apple and peach are more recent introductions; the former yields a handsome perfect fruit, and the late peaches are in demand wherever known. Pear trees in the Rio Grande Valley are long lived, there being many trees in the vicinity of Ysleta, in El Paso County, Texas, which measure 4 feet through the trunk, and have a height of over 60 feet. The El Paso or mission grape is a famous fruit throughout the Southwest, and the annual export of table grapes from El Paso alone exceeds 100,100 baskets. Great quantities of wine are also made, and find a ready sale. Another famous crop of the Rio Grande Valley is the El Paso onion, which is noted for its fine flavor and enormous dimensions. The quinces produced here are probably the finest and largest grown anywhere in the United States. Wheat yields from 30 to 60 bushels under irrigation, and corn from 30 to 40 bushels. Barley is exceptionally good in quality, and yields from 40 to 50 bushels per acre. Alfalfa yields from 4 to 6 tons per acre, sorghum from 5 to 10 tons, and millet, Hungarian grass, etc., yield enormously. The present irrigated acreage on both sides of the Rio Grande, in El Paso County, Texas, is about 25,000 acres. The taking out of numerous canals, in Colorado and New Mexico, has reduced the available water supply to its present limits. The United States has under consideration the construction of a large dam, and a system of irrigation canals, which will, when completed, supply water for 230,000 acres, making it thereby possible to sustain a very large population.

North of El Paso, in New Mexico, at La Luz and Tularosa, in the mountain region, is a limited area capable of irrigation, which is said to be very well adapted to the profitable cultivation of apples, potatoes, and commercial truck, and also well suited for commercial dairying.

FARMING IN THE PECOS VALLEY.

THE first construction of irrigation works, comprising a considerable acreage, was begun in the vicinity of Toyah Creek, in Reeves County, Texas, where supplies were grown for the military stations at Fort Stockton, Fort Davis, and Camp Lancaster, which afforded a good market for all sorts of agricultural products. Some of the irrigated farms were under cultivation as early as 1875. Smaller irrigations were carried on at both Fort Stockton and Davis. A ditch of considerable magnitude was also built on the Pecos River, near the Falls, and convenient to Camp Lancaster and Fort Stockton. With the construction of the Texas & Pacific Railway, prices of farm products were greatly reduced, and after a time the forts were abandoned. There being no other market convenient, most of the farmers of that day engaged in stock raising, which was very profitable, and farming became a secondary consideration. The country about Roswell N. M., was placed under irrigation early in the '80's, and about 1886, the Pioneer Canal, in Reeves and Ward Counties, Texas, near Pecos City, was begun. In 1890 construction on the magnificent Canal System of the Pecos Irrigation and Improvement Company was begun and completed about 1894. Since then there were built the Highland Canal, in Reeves County, and the Grand Falls Canal, in Ward County. Numerous smaller individual irrigations were constructed on the Peñasco, Black River, Felize River and other smaller streams. Accurate figures as to the mileage of canals and ditches constructed, is not at this time available. The Canal System, of the Pecos Irrigation and Improvement Company, comprises 1,200 miles, and the

mileage of the other companies and private irrigations will comprise as much more. The acreage made available for cultivation and irrigation will probably exceed 600,000 acres, making it possible for this valley to sustain a very large agricultural population.

The irrigable lands extend up and down the river for a distance of 200 miles or more, all of them convenient to railway transportation. The part of the Pecos Valley described herein, extends from the rocky bluffs on the western edge of the Staked Plain to the Davis, Guadaloupe, White and Capitan Mountains, the distance between the two elevations being from 60 to 80 miles, and from the mouth of the Hondo River, to the Grand Falls of the Pecos River, a distance of over 200 miles. The valley can be best described as a huge shallow trough, the center of which is 500 feet lower than the bluffs of the Staked Plain. At Grand Falls the altitude is about 2,500 feet above sea level, and at Roswell, on the Hondo River, 3,800 feet.

The irrigable part of the Valley is a narrow strip of land from 4 to 8 miles wide, sometimes on one, sometimes on the other side of the river. In this strip are nearly all the irrigating canals, the farms, orchards, and vineyards, towns and population of the Valley. Minor irrigated strips of land extend up Toyah Creek, Black River, Peñasco River, North and South Spring Rivers, the Felize River, Rocky Arroya, and smaller streams, but these are more in the nature of isolated farm communities and ranches. The Pecos Valley and Northeastern Railway running parallel with the Pecos River, from Pecos City to Roswell, 165 miles, is entirely within this irrigated strip of land. The Texas & Pacific Railway crosses it between Barstow and Pecos, so that nearly all of the irrigable lands are of easy access to railway transportation.

The tillable land of the Valley is, as a rule, a rich alluvial soil, formed in the course of ages from the washes of the mountains forming the western border of the Valley. The surface is generally very smooth and easy to cultivate. The prevailing color of the soil is a chocolate brown, changing in places to dark gray, red or black. Much of it resembles the soils of the Staked Plain. Nearly all of the soils scour the plow well, and can generally be broken with two ordinary horses and are then very mellow. Plowing can be done at any time in the year, as the soil can be moistened at the farmer's pleasure and be ready for the plow within 24 hours.

In common with the Valley of the Rio Grande, the Pecos Valley produces great quantities of fruits and vegetables, as well as the standard crops of other irrigated regions and of Texas generally. Alfalfa, a species of clover, is highly prized in all locations where irrigation is practicable. It has the advantage over all other forage crops, in that it needs be sown but once, for a number of years. The yield is from 4 to 8 tons per acre, according to the age of the field. It is usually cut 4 or 5 times a year and has no equal as a forage for farm stock. For maintaining work stock without additional feed, for the dairy and for raising hogs, it is unexcelled, being the best milk and flesh producer known. About 20,000 acres are devoted to this crop, which is worth, baled, from $6 to $10 per ton in the Valley.

INDIAN CORN and the several varieties of African grain, known as Egyptian corn, white and red Dhurra, Milo maize, Kaffir corn, African millet, etc., yield very satisfactory returns. The ordinary yield of Indian corn is 40 bushels per acre, frequently running as high as 60 and 70 bushels, and of the African varieties 35 to 45 bushels. Broom corn yields heavily and furnishes a superior brush. Indian corn generally sells at 90 cents to $1.25 per 100 pounds, the same prices being generally paid also for the African varieties.

THE SORGHUMS of the different varieties for hay and for syrup are extensively cultivated. From 6 to 12 tons of sorghum fodder or hay are obtained, worth generally from $5 to $7 per ton. The syrup sorghums are very sweet and yield more syrup per acre than any other region known.

THE CEREALS, such as wheat, rye, oats, barley, etc., without exception, yield well and produce a superior grain, as they are not liable to injury from rains during harvest. The average yield of wheat is 25 bushels per acre, though as many as 60 bushels have been obtained. Forty bushels of oats are the average per acre, while 90 bushels are not an uncommon yield. Barley, as in the Rio Grande Valley, is of superior quality. During the last few years these products have been excessively low in price, and were, therefore, generally grown in small quantity and as a catch crop. Sown in September or October, they are usually ready for the harvest about

the middle of May, the same land being used for a second crop. Alfalfa furnishes a superior substitute for nearly all kinds of hay grasses and for many of the grains, the latter being used only for fattening butchers' stock.

COTTON has not been grown to any great extent in the New Mexican part of the Valley. Owing to its general cheapness within the last 3 or 4 years, very little attention was paid to its cultivation, though it yields a lint far superior to the average cotton grown without irrigation. On the irrigated farms in Texas it is grown extensively, and from $\frac{3}{4}$ of a bale to 1 bale are harvested. Some 4,000 bales of 500 pounds each, were produced at Barstow and Grand Falls, in Ward County, in 1898. Cotton is often planted on land from which small grain has just been harvested. Fall wheat should mature about the middle of May, and cotton planted after this time will yield quite well.

THE SUGAR BEET is one of the most profitable crops that can be grown in the Pecos Valley. It is a product that is consumed entirely at home. A beet sugar factory, consuming 250 tons of beets per day, for a period of 120 days in each year, was erected at Eddy, N. M., in 1896. The total consumption of the factory amounts annually to 40,000 tons of beets for each running season or sugar campaign. The beets so consumed must be furnished by the farmers, with whom contracts are made annually, and who receive an average price of $4 per ton. The disbursements by the factory to the farmer for beets amount to about $160,000 annually.

The yield obtained by the farmer varies from 6 tons to 22 tons per acre, about 12 tons being the average. The quantity of sugar extracted from the beets is about 12 per cent, or about 240 pounds of white granulated sugar per ton of beets. The erection of one or more additional factories in the Valley is in contemplation, and may, within a year, be brought about. After the extraction of the sugar from the beets, there remains about 45 per cent of beet pulp, one of the richest and most valuable milk producing cattle feed known. With this extremely valuable by-product at hand, creameries and cheese factories can be established and maintained at the smallest cost.

Commercial Fruit Growing. Fruit is not a chance crop in this Valley, and the varieties grown are selected wholly with a view to find

favor in the markets at high prices. Among the grapes grown are: the Muscat of Alexandria, the Flaming Tokay, Black Hamburg, Emperor, Rose of Peru, Sultana, and others, all known as high priced fancy table grapes, which cannot be produced in a country dependent on the rainfall; among the pears profitably grown are: the Bartlett, Winter Nellis, Duchess, Clapp Favorite, etc. The Elberta, Crawford, Piquette, Heath, and Chinese cling peaches are found in most orchards, and apricots and nectarines yield large handsome fruit. Plums, prunes, and cherries of Asiatic, European and American varieties, grow and fruit to perfection.

The apple is the standard fruit of the Valley, for here it reaches its greatest perfection, being absolutely perfect in form, color, size and flavor. It can be produced in unlimited quantity and of uniform quality year after year. There are no insect depredations and no fungus diseases of any kind, the trees being perfect in growth, free from insect punctures, show no signs of disease, and have a perfectly smooth bark. The largest apple orchard in the Valley comprises 65,000 trees, and is situated at Roswell, N. M. It was planted in the fall of 1894.

Commercial Truck Gardening. CABBAGE. The minimum yield of an acre of cabbage in the Pecos Valley should be 10,000 pounds, but with manuring and careful cultivation this can be increased to from 20,000 to 30,000 pounds. On the basis of present prices and a yield of 10,000 pounds, an acre of cabbage would net $120 after deducting freight charges and crates. "Thorburn's Flat Dutch," "Brill's Nonesuch," and "Henderson's Succession" are recommended as well suited to the trade.

ONIONS. After the middle of November onions bring from 1 to 2 cents per pound in Texas. As much as 45,000 pounds of onions per acre have been produced in the Texas part of the Valley. At only 1 cent per pound in Dallas, after deducting freight and sacks, a yield of 10,000 pounds per acre would net $100, but with proper cultivation this could be more than doubled.

IRISH POTATOES. The spring crop in Texas is abundant and excellent in quality, but long before September it is entirely consumed. A good fall potato is grown in the Valley and is readily sold at high figures.

CAULIFLOWER. This is a highly profitable crop. It is usually shipped in the same car with cabbages. Wholesale quotations in Texas towns for the entire year will average 7 cents per pound.

CELERY. A large and profitable business in Pecos Valley celery has been developed within the past three years, the annual shipments reaching about 15,000 crates of 8 bunches each. While its cultivation requires a considerable outlay of labor and money, it is said to yield a revenue of about $300 per acre.

Freight and express rates from the Pecos Valley to the large cities in Texas are lower than from any other localities where similar products are grown, the distance is less, and perishable goods can be delivered in much better condition than from other competing points.

The several irrigation companies in the Pecos Valley, from whom information in regard to lands, water rights, etc., may be obtained on application, are the following:

The Pecos Irrigation and Improvement Company, Eddy, New Mexico.
The Roswell Land and Water Company, Roswell, New Mexico.
The Marguerita Canal Company, Barstow, Texas.
The Grand Falls Irrigation and Improvement Company, Grand Falls, Ward County, Texas.

THE CITIES AND TOWNS OF THE IRRIGATED REGION.

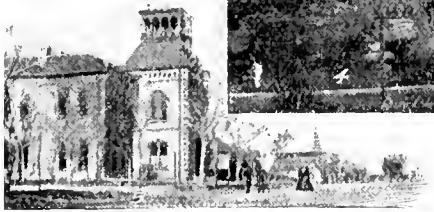
THE CITY OF EL PASO, TEXAS. This beautiful city of 20,000 inhabitants lies on the east bank of the Rio Grande, at the most convenient point, where an easy passage could be had from the interior of Mexico to the territory of the United States. On the Mexican side of the Rio Grande are the Sierra Madres, a range of high, picturesque mountains, skirting the river for a hundred miles or more, opposite the city lies the only easy passage through this range. On the American side tower the Franklin Mountains, and between these mountain ranges, on the fertile river bank, lie the city of El Paso and its Mexican neighbor, El Ciudad Juarez, formerly El Paso del Norte. An hour's walk up the side of Franklin Mountain will present a glorious view of the two cities, separated by the Rio Grande, and surrounded by many miles of flourishing orchards, vineyards and grain fields, and to the east, 12 miles away, may be obtained a glimpse of Ysleta, the oldest town in the valley, if not of the United States. El Paso is 646 miles west of Dallas, on the extreme western limit of Texas, and lies 3,670 feet above sea level. Its history is a marvelous compendium of romance, of bitter struggles for supremacy between its earliest inhabitants, Pueblo Indians and depredatory tribes, between explorers, traders, soldiers, monks and priests, followed by long periods of rest and sleepy contentment. From El Paso del Norte came the hordes of Spanish soldiers and monks, who overran and conquered New Mexico, and to El Paso del Norte returned the shattered remnants of Spanish power, a hundred years later, when the Pueblo tribes rose in rebellion, and drove out the last Spaniard in New Mexico. The old town of Paso del Norte (Juarez) still shows, in its style of architecture, that defence was the first and last consideration, and nearly every house was a fort in itself. With the American occupation came the assurance of safety and permanent peace.

THE SMELTER AT EL PASO.

Up to the year 1880, El Paso was a stagnant Mexican village on American soil, but with the advent of the several railway lines, it was suddenly converted into an active modern city. It is now the most handsome and most substantially built city in all Texas, all its structures being built of brick or stone. The streets are graded and macadamized, and the business blocks and residence buildings modern and architecturally handsome. Among the most handsome and extensive public and private buildings are the county court house, which is unsurpassed in Texas for its beauty, the U. S. custom house, the city hall, opera house, the several church buildings, the military post Fort Bliss, the Sheldon block, the Vendome Hotel,

the Pierson House, etc. El Paso is an important manufacturing, as well as commercial, point, and has among other local enterprises, two extensive ore smelting works, a foundry, planing mills, flour mills, cornice works, ice factories and refrigerators, tanneries, soap factory, brick yards, stone yards, railway repair shops, etc. A complete system of telephone and telegraph lines, street railways, electric light, water works, fire department, and other municipal conveniences, as well as a fine public park, are maintained. Much of the business transacted is international in its character, El Paso being the general supply point for a very large portion of northern Mexico which consumes vast quantities of mining and ranch supplies. It is situated in the midst of a vast mining region, drawing from it an extensive trade, and transacts also a great business in grain, cattle, wool, and hides. Nearly all the business of the irrigated farms on both sides of the river is handled here, the annual product being, approximately, 30,000 bushels of corn, 50,000 bushels of wheat, 25,000 of oats, 10,000 of barley, 6,000 of sweet potatoes, 3,000 of Irish potatoes, 10,000 tons of alfalfa, and 5,000 bushels of peas and beans, the whole crop worth about $250,000. The fruit and vegetable crop in money value generally exceeds that of the ordinary field crop. The value of the annual exports is estimated at about $10,800 for peaches, $20,000 for apples, $4,000 for plums, $15,000 for melons, cantaloupes, etc., $65,000 for miscellaneous truck, $25,000 for grapes, and about $2,000 for honey.

The mercantile establishments in El Paso number about 250. The financial transactions are made through three national banks. The transportation facilities are excellent. It is the terminal point of five of the great railway systems of the United States, and the most important city on the great southern route between the Gulf and California. It is the western terminus of the Texas & Pacific Railway,



VIEWS IN EL PASO.

1. San Antonio Street
2. First Baptist Church
3. Federal Building.
4. Sheldon Block
5. Central School.

MEXICAN WATER CARRIERS.

the Galveston, Harrisburg and San Antonio Railway; the southern terminus of the Atchison, Topeka and Santa Fe Railway, and of the El Paso and Northeastern Railway; the northern terminus of the Mexican Central Railway and of the El Paso, Sierra Madre and Pacific Railway, and the eastern terminus of the Southern Pacific Railway. It is the gateway to northern Mexico, and the half-way house on the road to California. Its fame as a health resort has made it the Mecca of the thousands in search of health, and as a pleasant abiding place, it is known to many thousands more who have spent their vacations there.

Ysleta and San Elizario are very old towns situated on the Rio Grande 12 and 20 miles respectively from El Paso. They have about 1,500 inhabitants each, most of whom are Pueblo Indians and Mexicans, with a sprinkling of Germans and Americans to attend to mercantile transactions. Both towns were in existence in 1620 when the Spanish Jesuits established themselves in the Valley. In the midst of a beautiful country, surrounded by orchards, vineyards, gardens and well tilled farms, the old towns remind the visitor of Irving's Sleepy Hollow, where the inhabitants dream of glorious days gone by, possibly to return in centuries to come hereafter.

Van Horn, near the center of the county of El Paso, on the Texas & Pacific Railway, and about 5,000 feet above sea level, is an important supply and shipping point for the surrounding cattle and sheep ranches, and various mining camps. It has about 150 inhabitants.

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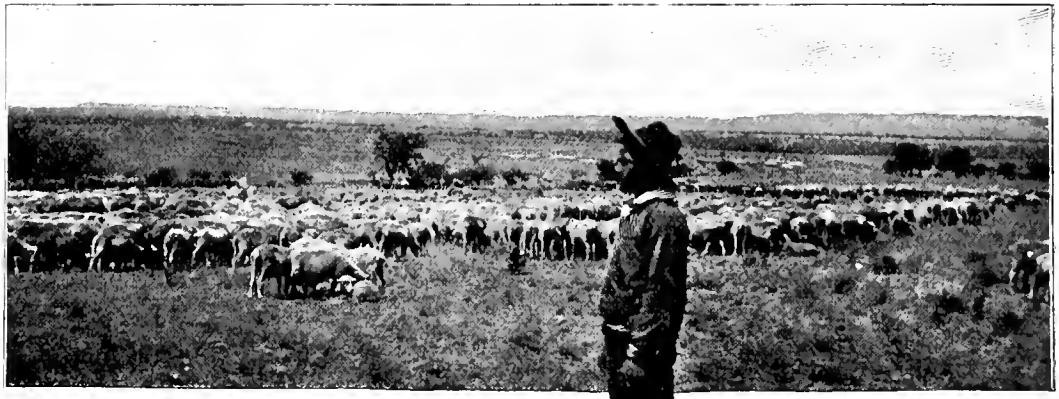
PECOS CITY, TEXAS. This is the county seat of Reeves County, and is 432 miles west of Dallas, by way of the Texas & Pacific Railway. It is also the initial point of the Pecos Valley and Northeastern Railway, whose line of railway extends northward along the Pecos River to Eddy and Roswell, New Mexico, a distance of 165 miles. Pecos City has a population of about 1,500, and is a great supply and shipping point for a number of small villages and ranches away from the railways, and for about 150,000 acres of irrigable lands within easy reach. It has extensive stockyards, wool warehouses, and does a large business in cattle, hides, wool and country produce. It has several large commercial houses and transacts the banking business within a radius of 100 miles. The crops of the country handled at Pecos City amount to about 25,000 bushels of corn, 3,000 bushels of oats, 5,000 bushels of sweet potatoes, 2,500 tons of hay, and about 1,000 bushels of beans, most of these products being grown on the irrigated farms along Toyah Creek, some 25 miles southwest of Pecos City. The Pecos Red Sandstone Company has its headquarters here, though the quarries are located 11 miles east of Pecos City, in Ward County. The stone has a beautiful color, and is equal in solidity and durability to any building stone in the United States. The handsome court houses at San Antonio, Dallas, the federal buildings at Fort Worth, most of the buildings at Fort Bliss, and numerous large buildings in the various cities of Texas have been erected with this stone. Indications of oil and asphalt, deposits of salt, large beds of sulphur have been found in various parts of Reeves County, and silver ores are said to exist in the Davis Mountains in the southwestern part.

The climate is very agreeable and highly beneficial to people suffering from pulmonary complaints. The town is supplied with water from numerous artesian wells, the waters of which have been found beneficial to persons afflicted with rheumatism, chronic indigestion and chronic diarrhœa. An artesian sulphur well, at Toyah Station, 20 miles west of Pecos City, where excellent hotel accommodations can be had, is also recommended for the cure of similar ailments. The altitude of Pecos City is 2,580 feet; of Toyah, 3,100 feet above tide-water.

BARSTOW, TEXAS. This town is the county seat of Ward County, and is six miles east of Pecos City. It is a neatly built town of about 300 inhabitants, surrounded in all directions by well kept farms, orchards and vineyards. Some 3,500 to 4,000 acres are in actual cultivation within sight of the town. Barstow is headquarters of the Marguerita Canal Company, which has made available for tillage, close to town, some 35,000 to 40,000 acres, all of which have been provided with ample facilities for irrigation. The cotton export, for 1898, amounts to about 2,000 bales, bringing an average price of 6 cents per pound, the lint being exceptionally fine, and superior to that of eastern Texas. About 3,000 tons of alfalfa were produced, selling at $8 per ton, and yielding an average of 4½ tons per acre. During the months of March and April, when the spring lambs come in, there is great demand for green pasturage for ewes, and as much as $3 per acre has been paid for thirty days' pasturage. Peaches yield a perfect, very large, well flavored and handsome fruit, which will sell in any market. Prunes promise to become a leading export fruit in time. All of the orchards are young, but very promising in appearance. Garden truck and sugar beets yield enormously. Sorghum hay yields from 6 to 10 tons per acre, and finds a ready sale.

GRAND FALLS, TEXAS, is a town of about 400 people, on the east bank of the Pecos River, some 17 miles due south of Monahan Station, on the Texas & Pacific Railway. It is in Ward County, and on the main canal of the Grand Falls Irrigation & Improvement Company. It has a large sanitarium, a good hotel, a cotton gin, several churches, a good school, several substantial business houses, a newspaper, and such other conveniences as a town of its dimensions can afford. Surrounding the town are several thousand



SHEEP RANCH—EL PASO COUNTY.

BRINGING IN WOOD ON BURROS.

acres, cultivated in cotton, corn, alfalfa, vegetables and fruits. Some 1,500 bales of cotton were marketed in 1898. About 25,000 acres of fine land are under irrigation and are being rapidly settled up by energetic farmers from Minnesota, Wisconsin, and other Northern States. The place is easily reached from Monahan Station by stage, or by private conveyance from Barstow or Pecos.

TOYAHVALE is a small Mexican village in Reeves County, situated at the head of Toyah Creek, about 20 miles south from Toyah Station, on the Texas & Pacific Railway, and about 10 miles east of the Davis Mountains. It lies in one of the prettiest valleys in the State of Texas, in the midst of some 25,000 acres of the richest land the sun shines on, and is surrounded by picturesque mountains on every side. Four miles west is the famous Phantom Lake, formed by a bold stream of the clearest water, rushing forth out of a cavern, creating a lake and losing itself in the sands a few hundred yards further on. Six miles further west is Limpia Cañon, a deep, narrow gash, cut through the Davis Mountains, forming a passageway to Fort Davis, a town of 500 inhabitants, and county seat of Jeff Davis County, distant about 25 miles from Toyahvale. In the bottom of Limpia Cañon flows Limpia Creek, a clear, bold stream, rushing over a gravelly bottom, to finally lose itself, after having irrigated a number of farms near Fort Davis, in the sandy plains beyond the mountains. The walls of Limpia Cañon are precipitous and rise from 300 to 1,000 feet above the bottom of the creek. Toyah Creek is formed by a tremendous spring of pure, clear water, which bursts out in the open plain and makes the creek, which is about 40 miles long, and is reinforced by other large springs in its course. At its mouth is Toyah Lake, a body of salt water, some 4 or 5 miles long and 2 or 3 miles wide, affording splendid beaches for bathing and excellent opportunities for boating and hunting—a sportsman's paradise, where innumerable water-fowl abound in summer and winter. Some day it will become a famous watering resort, a gathering place for tourists and health seekers, for sooner or later someone will build a good hotel there and furnish good accommodations. The Toyah Valley is an ideal spot to spend a vacation in. Quail, ducks, curlew, geese, doves, etc., are abundant everywhere, and in the mountains the black-tail deer is no stranger. In Phantom Lake, Toyah Spring and Toyah Creek, the festive black bass and rainbow perch, and the ever hungry blue channel catfish, abound.

Strung along the creek, from its head almost to the lake, are a number of elegant farms, which are irrigated from canals taken out at the head of the stream, as well as further down. Magnificent crops of corn, cotton, small grain, alfalfa, vegetables, sweet potatoes, sorghum, etc., are annually produced, and marketed at Pecos City and the stock ranches and mining camps within easy reach.

EDDY, NEW MEXICO. This is an incorporated town of 1,500 inhabitants, situated on the west bank of the Pecos River, 90 miles north of Pecos City, by way of the Pecos Valley & Northeastern Railway. It is the general headquarters of the Pecos Irrigation & Improvement Company, which owns and operates the largest irrigation canal system in the United States. The head of this canal system is Lake MacMillan, an artificial body of water, 11 miles long and 5 miles wide at its greatest width. It is the great storage

lake of the system. Through suitable headgates, the water is let into the Pecos River bed, as wanted, and conducted into Lake Avalon, a distributing reservoir, 6 miles long and 3 miles wide. Here, passing through another series of headgates, the water enters the main canal, and, through innumerable smaller canals, the water is distributed in sufficient quantity to irrigate 200,000 acres, about 25,000 of which are in actual cultivation. The canal system extends southward from Eddy for a distance of 50 miles. The town, which is the county seat of Eddy County, is 3,100 feet above sea-level, and enjoys, both in summer and winter, a most delightful climate. It is surrounded by numerous orchards, farms and vineyards, by several extensive parks, and all its streets, as well as the lanes in the suburbs, are shaded by rows of tall trees. It is a favorite resort for people suffering from pulmonary troubles, and has most excellent accommodations for their comfort. The Windsor Hotel is a well managed and well appointed hostelry, well and favorably known throughout the Southwest. Accommodations in private houses can also be had, at moderate charges. Among the private and public buildings of note are the Eddy Club, 6 attractive church buildings, a fine 12-room brick school building, an elegant court house, several fine brick business blocks, numerous elegant residences, water works, railroad shops, electric light plant, an ice factory, and a fully developed water power, sufficient for a number of large factories. One of the most important enterprises is a large beet sugar factory, which consumes about 40,000 tons of beets per annum, the product of about 4,000 acres, and turns out about 35 tons of granulated sugar per day. When in operation, which is usually from September to March, it employs about 150 persons. The traffic of the town consists largely in the export of wool, cattle, muttons, sugar, hogs, alfalfa hay, grapes, honey, fruits, and farm products generally. In addition to the city and local ranch trade, there is also a traffic of considerable magnitude with the ranches in the mountains, and the towns of Weed, Peñasco, Otis, Florence, Malaga, etc. There are some splendid resorts, with fine scenery, in the vicinity of Eddy, such as the famous fishing places along Rocky Arroya, some 17 miles northwest, the Rush Ranch, in the Gaudaloupe Mountains, Gaudaloupe Caves, etc. Quail, doves and rabbits can be found in abundance all the year round; ducks, plover, geese and curlew are numerous during the winter months; antelope are still found in Eddy County, and in the Gaudaloupe Mountains, some 40 miles west of Eddy, black-tail deer, wild cats, black bears, an occasional mountain lion, coyotes, lobo wolves, badgers and native foxes, turkeys and squirrels, exist in considerable numbers.

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ROSWELL, NEW MEXICO, situated in the northern part of the agricultural and fruit growing portion of the Pecos Valley, is a town of 1,500 inhabitants, and the county seat of Chaves County. It is the present terminus of the Pecos Valley & Northeastern Railway, and is pleasantly located in a basin near the head of North Spring River, lying midway between this stream and the Hondo River. It is about 20 years old, and substantially built, nearly all the business houses being constructed of brick, and of modern design. The town has 2 good graded schools, in roomy brick buildings, 4 church organizations owning attractive places of worship, a flourishing commercial club and Board of Trade, with elegantly furnished club rooms, one bank with $50,000 capital, a United States

land office, a United States agricultural experimental substation, a free reading room, Board of Health, a volunteer fire department, a small packing house, a broom factory, a flour mill, 3 hotels, a court house, 3 weekly newspapers, 10 miles of graded streets shaded with stately cottonwood, and numerous well built and attractive business blocks. The railway shops are located here, and a beet sugar factory is to be built in the near future. An important institution is the New Mexico Military Institute, built and maintained under the auspices of the Territory of New Mexico. The buildings are of brick, trimmed with red sandstone. They are three stories, with basement, lighted by gas, heated by steam, hot and cold water on every floor, perfect fire apparatus, complete system of water works, and perfect sewerage. The furnishings are new and modern, and few hotels can afford more genuine comfort. The buildings will accommodate 200 students. The course embraces the study of the modern languages, mathematics, natural sciences, a business course, and a general training valuable in after life. The faculty is a strong one, derived from the best colleges in the United States.

Roswell is the supply point for a large number of cattle and sheep ranches, lying north, northeast, and northwest, as well as for the towns of Lincoln, Nogal, White Oaks, Fort Stanton, Hagerman and smaller places, scattered over an area several hundred miles in extent. Of the local products, large quantities of apples, onions, cabbages, cauliflower, honey and celery are shipped annually to Texas The exports of celery, in 1897, amounted to about 10,000 crates, containing 8 dozen plants each, and the same met with a ready sale. There is no record available of the amount of wool shipped, but it is thought that the exports will exceed 1,000,000 pounds. A great and profitable business is the export of mutton lambs. The facilities for feeding and fattening cattle, muttons, and hogs, are exceptionally good at Roswell, and the exports of fattened butchers' stock from this point are very large. The finest animals of any popular breed can be found on the farms near Roswell, probably in greater number than anywhere else in either Texas or New Mexico.

The irrigating facilities of the country surrounding Roswell are magnificent. Five large streams, each fed by immense springs, furnish an enormous quantity of water, by which some 20,000 acres of fertile lands, lying close to town, are irrigated, the surplus flowing into a canal 30 miles long, from which as much more land is supplied with water. In addition to these are the waters of the Hondo, a stream heading in the Capitan Mountains, which irrigate another large acreage. Some 30 or 40 strong flowing artesian wells also contribute their share to the water supply, used for irrigation.

All the fruits of the temperate zone are grown here to perfection, but the apple in particular, is without rival for size, beauty, flavor or soundness. The acreage in the old bearing orchards is comparatively small. The young orchards, many of which are now bearing, cover about 1,300 acres, one orchard alone including over 500 acres.

MINES AND MINING IN TEXAS.

VERY little has been done in Texas, in the way of developing the immense mineral resources of the State. Good ores of various kinds are found in all parts, but nowhere is there a fully developed mining industry. The counties along the line of the Texas & Pacific Railway, share in this natural wealth to a considerable extent, and a memorandum of the known sources of supply may be in order.

Iron ore is abundant in nearly all the woodland counties of eastern Texas. Iron smelters are operated at Kelleyville and Rusk, and a foundry for manufacturing car wheels has been in operation at Marshall for a number of years.

Potters' clays, brick and fire brick clays of the best quality are abundant in Bowie, and many east Texas counties, and Henderson, Denton, Dallas, Parker and Erath Counties, and, in some localities, are being extensively worked. Large potteries are in Bowie and Denton Counties, brick and tile works at Athens, in Henderson County, Dallas, at Bennetts Station, in Parker County, and at Thurber, in Erath County.

Salt is extensively mined at Grand Saline, in Van Zandt County, and Colorado City in Mitchell County. Extensive salt deposits exist in El Paso County, but, being remote from railway transportation, are not being worked.

Coal is extensively mined at Thurber, in Erath County, and at Rock Creek, in Palo Pinto County. Deposits of coal exist in four or five counties in the same locality, but no developments have been made. It is also present in El Paso County, in several localities. In several counties in eastern Texas, beds of lignite have also been found, but have not yet been turned to practical account.

Petroleum, in merchantable quantity and quality has been developed at Corsicana, in Navarro County, and a considerable number of oil wells have been bored. It has also been found at Waco, in McLennan County. Asphalt appears to be abundant at St. Jo, in Montague County, and has also been found in Reeves County. Gas has been found in several wells in Palo Pinto County.

Sulphur in immense quantity exists in El Paso County, in the vicinity of Delaware Creek. Efforts are now being made to develop these deposits.

Gray lime and sandstone occurs plentifully in Parker, Eastland, and adjoining counties; red sandstone, of superior quality in Ward County, near Pyote Station; blue limestone, red sandstone, white, black, red and varigated marbles in El Paso County, near Van Horn Station.

The metals, both precious and base, excepting iron, which is present, more or less everywhere, are confined more especially to two large districts in the State. The one is in central Texas, known popularly as the Llano District, a region of volcanic upheaval, apparently rich in gold, silver, copper, and other valuable ores. The other is in the Trans-Pecos County, and embraces the spurs of the Rocky Mountains, reaching into Texas, many of the peaks reaching the height of 6,000, 7,000, 8,000 feet, El Capitan in the Guadaloupe Range, about 10,000 feet.

Indications of gold ore, specimens of gold bearing float rock have been found in nearly every mountain range, but no placer diggings or extensive gold veins have as yet been found or worked. Their existence is beyond doubt, and it is only a question of time, when they will be discovered and developed. Silver ores, in combination with lead, zinc, and copper, have been found in many places in well defined veins, and have, to some extent, been developed.

The Shafter Mining Co., in the Chinati Mountains, on Cibolo Creek, have a ten stamp mill, and have shipped, for a number of years, between 30,000 and 40,000 ounces of silver per month. The Hazel Mine, at the foot of the Sierra Diabolo, north of Van Horn Station, has shipped some $200,000 worth of silver-bearing copper ore. The analysis from other mines and prospects show from 3 to 300 ounces of silver to the ton. Others show gold from traces up to 3 ounces, copper to 50 per cent, lead to 60 per cent, zinc, 30 and even 54 per cent, alone or with precious metals. Magnetic and hematite iron ores abound, and traces and indications of other valuable ores, such as tin, cinnabar, uranium, etc., are frequently encountered.

The mountain ranges which have been more thoroughly prospected are the Carrizo Range, about 3 miles north of Allamore Station, on the Texas & Pacific Railway; the Quitman Mountains, some 10 miles southwest of Sierra Blanca Station, the Diabolo Mountains, some 8 miles northwest of Van Horn Station; the Eagle Mountains south of Torbert Station, and the Chinati Mountains, in Presidio County, All except the last named are easily reached from Sierra Blanca Station, on the Texas & Pacific Railway, where information and supplies can be obtained. The Shafter mines in Presidio County are reached by way of Marfa Station, on the Southern Pacific Railway.

Mineral Waters and Health Resorts.

TEXAS has certainly been favored by Providence in a goodly supply of Nature's most valuable productions, and among these are the hundreds of mineral wells, springs, hot and cold, many of which are yet unknown and undeveloped, but in reality possessed of curative properties far surpassing those of any yet discovered. Among the many may be mentioned the thermal wells of Waco, the thermal artesian sulphur well of Marlin, the purgative wells of Corpus Christi, the bitter waters at Cotulla, the chalybeate well of Gonzales, the Luling mineral well, the spring at Lampasas, the chalybeate and hot sulphur wells at San Antonio, the Wootan wells, the Sutherland springs, and also the celebrated well of Carrizo Springs in Dimmit County. The waters mentioned have already wrought thousands of cures in chronic gastric catarrh, dyspepsia, indigestion, rheumatism, kidney troubles, skin and blood diseases, etc., and in addition to these are hundreds of others, whose virtues are less well known but equally effective. Along the line of the Texas & Pacific Railway are quite a number of such, and of these we wish to make special mention. People suffering from the various ailments mentioned above, who are entirely free from pulmonary troubles, can undoubtedly find relief and cure in eastern and central Texas; where, however, the disease is complicated with asthma, consumption, chronic catarrh, and diseases of the throat, chest or lungs, the waters in western Texas and New Mexico, for climatic reasons are especially recommended.

Dalby Springs, Ingersoll Springs, Chalybeate, and Red Springs, all in Bowie County, are chalybeate in character, and locally are prized as of unquestioned value in the cure of dyspepsia, rheumatism and kidney troubles. Dalby Springs has a hotel; character of accommodations at the other springs not known.

Hughes Spring, in Cass County, on the Sherman, Shreveport & Southern Railway, is noted for the curative powers of its waters in cases of general debility, malarial and typhoid fevers. The place has about 400 inhabitants.

Hynson's Iron Mountain Springs, 6 miles from Marshall, Texas, in Harrison County, near the top of a hill, rising abruptly 610 feet, from which point the landscape is visible for a distance of 20 miles. The landscape is made up of hills and valleys, cultivated farms and stately pine forests. There are about 50 springs and wells in groups scattered about the top and sides of the hill. Water is present in the greatest variety, graduating from almost chemically pure to the strongest iron, sulphur, magnesia and soda waters. All of them are of easy access, over well-made roads and paths. Stomach troubles yield readily, and a natural and healthy appetite is soon secured. Indigestion is greatly benefited, and often cured. Diseases of women are frequently cured, and lasting benefits acquired. Diseases of the skin, scrofula, eczema, diseases of the bladder and kidneys, chronic diarrhea, constipation, hemorrhoids, and other ailments yield readily to the influence of these waters. The hotel accommodations are sufficient for 100 guests.

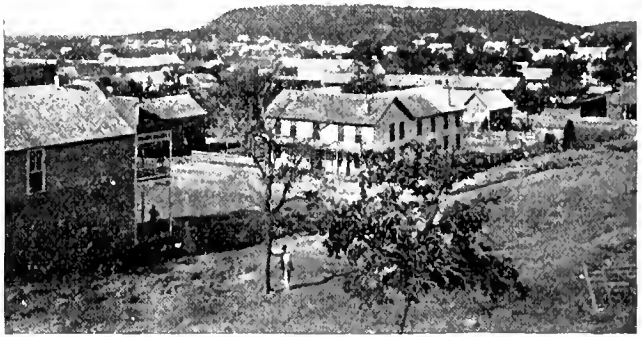
Rosborough Springs, also in Harrison County, situated in a pine and oak grove, 9 miles south of Marshall, are also famous for many cures effected there. They are recommended as useful in the treatment of liver and kidney troubles, indigestion, eczema or any cutaneous disease, old sores, etc.; also as a specific for strengthening puny delicate children, and correcting female irregularities. In the immediate vicinity of Marshall are several other springs, notably the Montvale and Hartley's, which are locally famous. Marshall has about 8,000 inhabitants and first-class hotel accommodations.

Phillips' Spring, situate 8 miles north of Gilmer, in Upshur County, is chalybeate in character, and is recommended in cases of debility, etc.

Capp's Mineral Well, at Longview, in Gregg County, has been highly recommended for the treatment of dropsy, Bright's disease, dyspepsia, biliousness, rheumatism and kindred diseases. A qualitative analysis made by Prof. Richard of the U. S. Department of agriculture, shows it to be a sulphur water, containing sulphate of iron, potash, sulphate of soda, salts, and chloride of lime and magnesia.

Musgrove Mineral Springs are situated $3\frac{1}{2}$ miles east of Winsboro, on the Sherman, Shreveport & Southern Railway, in Wood County. The analysis of the waters gives protoxide of iron, held in solution by free carbonic acid, as the leading property, accompanied by lime and magnesia. They are said by a distinguished chemist to be similar to the waters of Brighton, England. The accommodations consist of a good hotel of 25 rooms, and 6 cottages available for family use, in pleasant surroundings. Trains stop at Musgrove Station.

Mead Springs, near Honey Grove, in Lamar County, said to contain iron and other minerals, are a well favored local watering place.



MINERAL WELLS, THE COMING HEALTH RESORT OF TEXAS.

THE HEXAGON HOTEL, MINERAL WELLS, TEXAS.

Mineral Wells, Texas. These wells are more particularly described in a description of Palo Pinto County, Texas, on page 80 of this pamphlet. The waters possess wonderful medicinal properties, especially for the treatment of rheumatism, liver diseases, bronchitis, dyspepsia, sore eyes, kidney troubles, diseases of women, all skin diseases and chronic affections generally. From 3,000 to 5,000 patients visit the place annually. The accommodations are very good and the charges moderate. Through tickets to Mineral Wells are on sale at all railway stations.

Thurber Artesian Well, at Thurber, in Erath County, is, in accordance with analyses made, similar to the springs at Carlsbad, in Germany, and Bath, in England. The water of the well is recommended for the treatment of diseases of the liver, catarrh, jaundice, catarrh of the stomach and intestines, chronic diarrhea, chronic constipation, eczema, skin diseases, gout, rheumatism, weak eyes, and inflamed eyelids. The water is used internally as well as in baths. The hotel accommodations are ample and good.

Hico and Duffau Springs, also in Erath County, are highly recommended by the residents for the treatment of diseases of the liver, for general debility and chronic disorders of all kinds.

Cisco and Eastland Sulphur Springs, in Eastland County, are within a few miles of the towns of Cisco and Eastland. They have some local repute and are visited by the residents of the towns to secure relief from chronic ailments.

The Putnam Wells and Pecan Springs are in Callahan County. The first named at Putnam Station on the Texas & Pacific Railway. Locally, these waters are highly esteemed as cures for cancerous and scrofulous diseases.

The springs and wells mentioned above are only a few of the hundreds in Texas lying east of the 100th meridian and within easy reach of stations on the Texas & Pacific Railway They are situated in a section of country varying in altitude from 300 feet to 1,500 feet above sea level, and in a country where the annual rainfall varies from 25 inches to 50 inches, and where in consequence the degree of humidity is correspondingly high. Their value for the cure of diseases claimed for them cannot be successfully disputed. Anyone with sound lungs and free from diseases of the respiratory organs, can hope for relief and cure at one or the other of the hundreds of mineral springs and wells in eastern, northern and central Texas.

The one great drawback to the more extensive use of Texas mineral waters is the fact that very few of them have been improved so as to accommodate the demands of society. The high-priced hotel, with up-to-date trimmings and fixings, the park-like grounds, and other expensive adjuncts to all "elegant watering places," are in most cases missing. It will not be long until these fads will, in a measure, be satisfied, and capital will see the remarkable possibilities which this kind of investment offers. At many of the smaller places the ordinary fare of the Southern farm house will have to suffice for the present.

If the patient has a complication of diseases involving consumption, asthma, bronchitis, chronic nasal catarrh, or other diseases of the lungs or throat, relief should be sought west of the 100th meridian, in an altitude varying from 2,500 feet to 10,000 feet. The mineral springs in that section, scattered through western Texas and New Mexico, and the waters of many of the streams, will accomplish the relief and cure of most chronic ailments, but the cure of consumption and kindred diseases is only possible in a dry, rarefied and stimulating atmosphere, which can only be found at an altitude exceeding 2,500 feet.

The mineral waters in extreme western Texas and southeastern New Mexico have not been improved to any extent, and very few analyses have been made. The country is thinly settled, and the value of the waters is known only by local report.

North of Stanton Station, in Martin County, in the C. C. Slaughter pasture, are a number of sulphur springs which are recommended as favorable to the cure of indigestion and dyspepsia. Altitude 2,900 feet.

The Rio Pecos and its various tributaries are more or less mineralized, and chronic ailments of various kinds are cured by the continuous use of their waters. An appetite that has been lost for some time is quickly found along the banks of the stream and a good digestion secured. Rheumatism yields readily and disappears after a short use of the waters. There is a great difference in the quality and composition in the waters of the different tributaries, and their best uses can only be determined by actual analyses.

The artesian wells at Pecos City are more or less saline in character, and have a very beneficial effect in cases of chronic diarrhea, chronic indigestion, rheumatism, catarrh of the stomach, etc. Altitude 2,580 feet.

The great artesian sulphur well at Toyah Station, altitude 3,100 feet, is favorably remembered by many suffering from rheumatism, catarrh, dyspepsia, etc. Fine hotel accommodations.

The sulphur spring at Rocky Arroya, near Eddy, N. M., and the sulphur artesian well, at Roswell, N. M., are highly praised for their efficacy in curing dyspepsia, cutaneous diseases, sores and most ills that human flesh is heir to. It has always been the impression of the writer that the ordinary artesian wells at Roswell, N. M., were a good and sufficient remedy for rheumatism, kidney troubles, diseases of the bladder, indigestion, dyspepsia, at the same time being a clear wholesome water, good for all household purposes. Having no taste of the minerals contained in them, a very small percentage being carried in solution, more water would have to be drank and a longer time be required to obtain results, but, in a glorious climate like that of southeastern New Mexico and western Texas, this would be a boon rather than a drawback.

Within a mile or two of Eddy, New Mexico, immediately on the river bank are a series of powerful springs, the waters of which in chemical analysis are almost identical with those of Friedrichshall in Germany. These springs are useful and valuable in diseases of the stomach, liver and urinary organs; excellent for obstinate constipation; good for dyspepsia, and of excellent service in rheumatism.

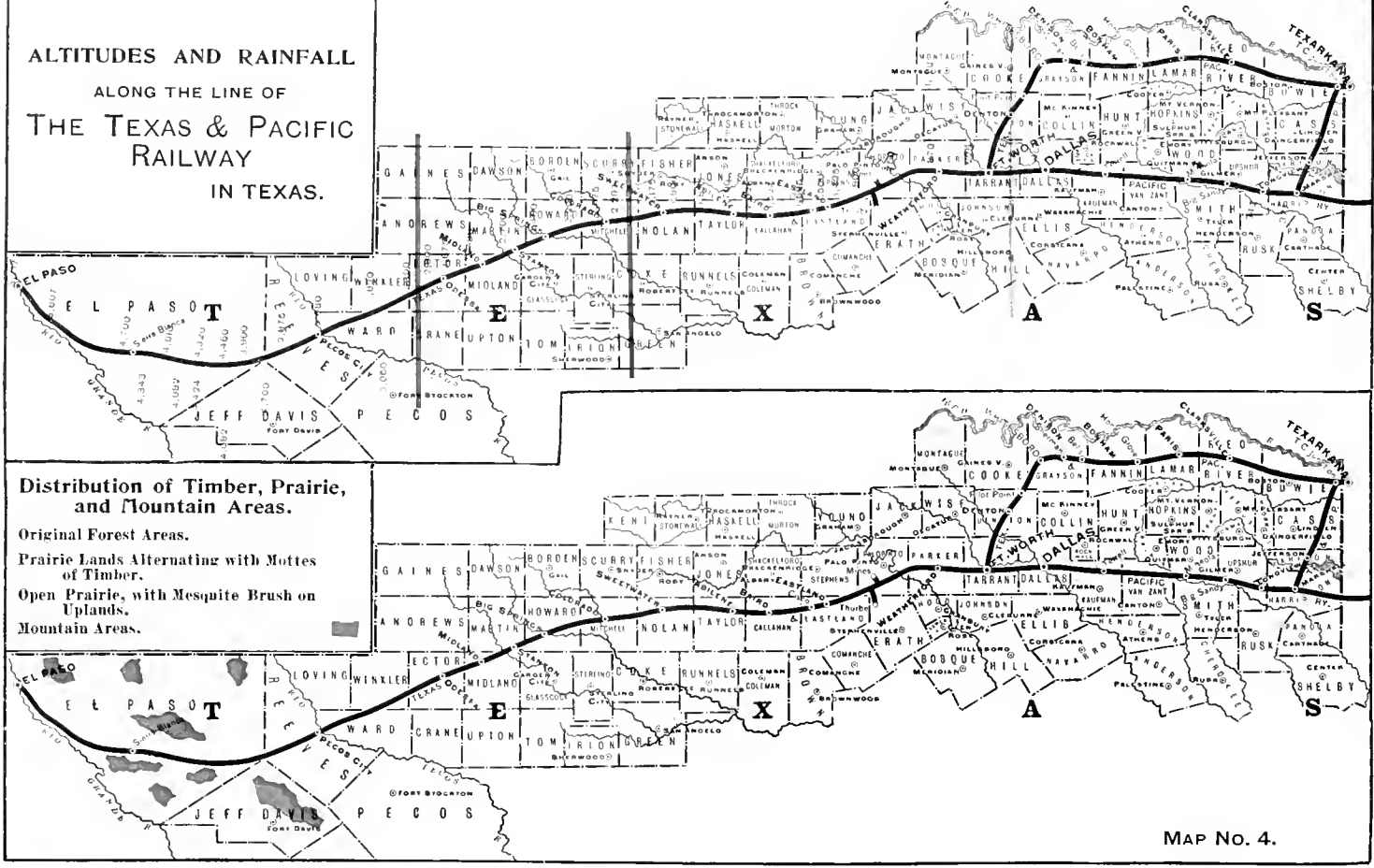
The Pecos Valley is full of mineral springs and wells, the value of which is as yet unknown. At one place on Delaware Creek, on the lines between Texas and New Mexico, is a nest of some 50 or 60 springs, varying from almost chemically pure water to the most execrable flavors that Nature's laboratory could compound. No two of the springs are alike, and until a thorough chemical analysis has been made it might be a dangerous experiment to try their effect on the human system. They lie in a region of former violent volcanic disturbance, and in close proximity to an immense area of sulphur deposits.

About 15 miles southwest of Sierra Blanca Station, on the Texas & Pacific Railway, are Hot Springs, which have been used for centuries by the Indians and Mexicans for rheumatism, neuralgia, and other diseases.

In south central New Mexico, easily reached from El Paso, Tex., are a number of hot springs, with good and ample hotel accommodations, which are worthy of special mention, all of them are of volcanic origin and are locally famous. They are the Ojo Caliente, in the Taos Valley; the Jemez Hot Springs, San Antonio, Peñasco, Zia, Coyote, Las Vegas Hot Springs, Hudson Hot Springs, Folsom Hot Springs, Cherryville Springs, Gila Hot Springs, Apache Tajoe Springs, Aztec Springs, McBeth Springs, and Mineral Artesian Well, at Springer, N. M.

SCENE IN NORTHWESTERN TEXAS

ALTITUDES AND RAINFALL
ALONG THE LINE OF
THE TEXAS & PACIFIC RAILWAY
IN TEXAS.



MAP NO. 4.

Consumption and Climate.

IT is probable that, at this time, there is no disease that afflicts so large a number of human beings, with such fatal results, as that of pulmonary consumption; none that causes so much suffering, pain and sorrow. Medical science has never been able to master it, or to discover medical appliances or remedies capable of curing it when it once has a firm hold upon its victim. All agree that Nature's remedy is the best and only cure.

A TEXAS CATTLE RANCH

This remedy must have the following characteristics to be efficacious: A dry, aseptic air, a light atmospheric pressure, a dry, porous soil, a maximum of sunshine, a minimum of cold, and a slight variation of temperature only between extremes of heat and cold. New Mexico and Texas, west of the 103d meridian, lie in the region of greatest dryness in the United States, and the rainfall for the entire region is between 12 and 20 inches, nearly all of it precipitated in the months of June, July and August, the remainder of the

year being almost entirely free from rain. The altitude varies between 2,500 and 6,000 feet. The air has a fresh crispness, bracing properties, which are instantly noticed by the new-comer. The dry air is a purifier, and a disinfectant. Meat exposed to it is dried

SCENE IN NORTHERN TEXAS.

and cured, but never spoils. The grass that grows on the plains does not rot, but cures perfectly on the ground; furnishing rich, dry forage all winter. In summer it is never uncomfortably warm in the shade, and in winter it is delightfully invigorating in the sun.

The death-rate from pulmonary disease is the lowest known on earth, and in no climate can life be spent so happily, with as much pleasure, and so little that is disagreeable, as in that of western Texas and New Mexico, which have an identical climate.

What the Doctors say.

The various medical authorities, who have thoroughly and conscientiously examined this region in connection with the cure of consumption, report thereon as follows:

DR. RICHARD H. COOLIDGE, Assistant Surgeon, United States Army, in his "statistical report on the sickness and mortality in the United States Army, compiled from records of the Surgeon-General's office, from 1839 to 1855," same quoted by Dr. W. M. Yandell, Health Physician of the city of El Paso, in *Texas Health Journal*, printed at Dallas, Texas:

Dr. Coolidge says: "The most important atmospherical condition for a consumptive is *dryness* . . . . this fact has been forcibly impressed upon the compiler during the minute examinations necessary to the preparation of this report."

"The worst possible climate for a consumptive, is one with long continued high temperature, and a high dew point . . . . a uniformly *low* is much to be preferred to a uniformly high temperature."

Referring to a table exhibiting the amount and ratio of sickness and mortality in the United States Army, in the several regions of the United States, from phthisis pulmonalis, Dr. Coolidge further says:

"It will be perceived, by an examination of the table, that, with the exception of West Point (which should be excluded for the reason that the cadets are young, only admitted after rigid examination, in regard to health and physical development, and remain but four years), the lowest ratio of cases of consumption occurs in New Mexico, being $1\frac{3}{10}$ per 1,000, and the highest in the South Atlantic region, where it is $9\frac{2}{10}$ per 1,000.

GEN. W. A. GREELY, Chief Signal Officer United States Army. in an article entitled "Where shall we spend our winter?" November, 1888, says: "The map of absolute humidity for January, shows, with other data, herewith, that—*dry warm air* is

STOPPING TO FEED

TEXAS COTTON.

found in southwestern Texas, and the southern portions of New Mexico and Arizona."

DR. JACCOUD, quoted by Dr. Denison, in the same report, referring to immunity from consumption, says:

"As to the quality of the climate, which affords this immunity, *altitude* is the most important element. . . . . Climates with a high altitude, having tonic and stimulating effects, can alone confer on the inhabitants absolute or relative immunity from pulmonary phthisis. . . . . The question of an altitude of immunity from phthisis (consumption) is important, because there is strong presumptive proof that those climatic conditions which prevail where phthisis seldom or never originates, are best suited to arrest the disease, when it has commenced elsewhere."

ASST. SURGEON G. K. WOOD, one of the medical officers, whose report is included in Dr. Coolidge's report, remarks in reference to diseases of the respiratory system:

"The climate of those broad and elevated table lands, which skirt the base of the Rocky Mountains on the east, is especially beneficial to persons suffering from pulmonary diseases or with scrofulous diathesis. The reports from the line of posts, stretching from the Upper Platte through New Mexico to the Rio Grande, give a smaller proportion of cases of pulmonary disease than those from any other portion of the United States. The air in this region is almost devoid of moisture; there are no sudden changes of temperature; the depressing heat of the Eastern summers is never felt; and although in the North the winters are extremely cold, a stimulant and tonic effect is the only result of exposure in the open air. It is of great importance that the climate of this region should be generally known; that the present injudicious course of sending consumptives to the hot, low and moist coast and islands of the Gulf of Mexico should be abandoned."

DR. DENISON, in the same report, says: "The preferable climate for the great majority of consumptives in the United States varies, according to the case, from 1,500 feet elevation in the North in winter, to 10,000 feet as a possible extreme in the Southern portion in summer."

Evidence from medical practitioners in civil life is given as follows. DR. NATHAN NUTTING, of Mount Vernon, New York, contributed to the *New York Christian Advocate*, in November, 1897, an article on pulmonary consumption, and the following

exeerpts are quoted from it: "In the year 1885 the Medical Congress of France appointed a committee to make a thorough examination in any part of the world that gave promise of the requisite climatic conditions in any considerable degree. . . . . The committee agreed that the proper temperature would be found between the 32d and 36th degrees of latitude, where the patient would not be exposed to the severe weather of the North or the enervating influences of the South.

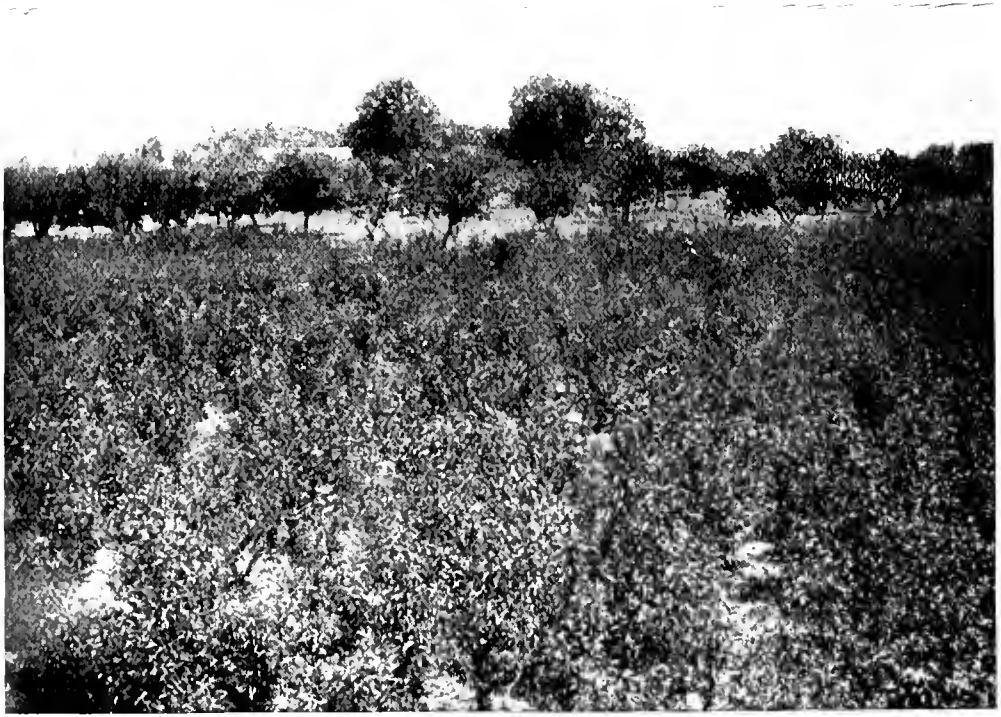
"They visited Asia, Africa, North America and South America, and agreed that the Rio Grande Valley of Central New Mexico was the locality wherein the necessary conditions were found in the highest degrees. The American Health Resort Association, in the year 1891, formally decided upon Central New Mexico as the most suitable place in the world, and indorsed the report of the French physicians who had investigated the subject exhaustively."

DR. JAMES H. WROTH, of Albuquerque, N. M., gave the result of his observations in an article in *The Sanitarium*. We quote from this article as follows:

"The best results of the climate are seen in the tubercular cases. Naturally, the effects of a climate are best seen among the native population, and the practice among them soon demonstrates the non-existence of phthisis, which becomes the more marked when we consider their habits of life, their total disregard of any care, and their social condition.

"No cases of phthisis occurring among Americans' born in the Territory have been reported. As many of the children born of parents who came here in the early days, have now reached manhood, and as many of these parents came to New Mexico 'for their health,' this fact is significant.

"In such cases where tubercular taint exists, but where no loss of lung tissue has taken place, there is a unanimity of opinion that the disease has uniformly been checked, and, as far as can be done in many instances, cured. At all events, the feeling of the profession is that of general, decided and lasting benefit."



PROF. HUGHES BENNET, of the University of Edinburg, declares:

"There is no health resort in Europe, not excepting the much lauded Riviera, that can show such a stable and equable range of heat and cold as can be found at the meteorological station at Santa Fe, New Mexico, changes throughout the Territory are never sudden; hence, the invalid and health seeker, by a little attention to his clothing, can exercise daily in the open air and have no fear of colds and inflammation of the air passages, so trying upon sufferers resident upon the Atlantic and Pacific coasts."

DR. J. F. DAUTER, writing in the *Medical Visitor*, says:

"I think New Mexico surpasses all localities for consumptives I have yet visited. . . . . I am of the decided opinion that the region visited is, for consumptives, superior to any other part of the United States, or the world, of which I have any practical knowledge."

DR. ROLAND G. CURTAIN'S essay on consumption in the *Medical News*, is summarized as follows:

"Salt air has a bad effect on tubercular lung disease by hastening the breaking-down process. Warm, moist air relaxes the tissues and blood vessels and enervates and relaxes the system at large. Rarefied air tends to prevent hemorrhage by arresting the ulcerative or other disease processes, and also by lowering the arterial tension. Cool air contracts the tissues and blood vessels, thus preventing the flow of blood when the tendency to hemorrhage exists, and blocks up the blood vessels—all favoring the arrest and prevention of bleeding. The purity of aseptic air favors repair and cure of the lung disease and kills and dwarfs the action of the disease germ.'

DR. HENRY O. MARCY, in the *Journal of the American Medical Association*, says:

"Exercise in elevated localities has an especially invigorating effect on the respiratory functions and apparatus, the circulation is improved, thereby increasing the oxidation of the tissues, as well as producing a better cellular nutrition of the effete material."

DR. GATCHELL, writing in the *Medical Era*, says:

"The high interior of our continent comprised in the great table land extending from the 'Great Divide' in Colorado through New Mexico is not excelled anywhere in the world as a resort for consumptives. The altitude, the dryness, the purity of the atmosphere, and the large amount of ozone it contains, combine to create conditions very favorable to recovery from consumption."

Where to Seek Health as well as Pleasure.

THE invalid who is free from the taint of consumption and kindred diseases, is free to seek relief at any of the mineral springs and wells scattered throughout Texas. The winter months in northern and central Texas are decidedly agreeable, as compared with the grim cold of the Northern States. Good hotel accommodations can be had in all of the larger places in Texas, at very moderate rates, and the number of watering places is so great, that one need not go far in any direction to find what is sought for. A tour by way of Texarkana, Marshall, Tyler, and other watering places in the woodland counties, extended to San Antonio, Rockport, Corpus Christi, Waco, Marlin, Mineral Wells and Thurber, will not be regretted. The country is old and well settled, the cities are large, and the smaller places have all modern comforts, so that a prospective visitor need not worry about the hotel accommodations. The undeveloped mineral springs are generally near the smaller towns; at the more remote springs reliance for accommodations must be placed on the farms in the neighborhood. The large cities like San Antonio, Waco, Houston, Galveston, Dallas, Fort Worth, etc., afford all the diversions common to Northern cities. In the smaller places, and within easy reach, there is hunting and fishing. Excepting an occasional deer in the woodland counties, large game is scarce, but squirrels, raccoons, opossums, quail, ducks and geese are still abundant along the lakes near Marshall and Jefferson, and the fishing is particularly good. The vicinity of Rockport, Corpus Christi, and other points along the Texas Coast, is unexcelled for sea fishing and the shooting of water fowl.

For the pulmonary invalid, with whom climate is the essential remedial agent, different conditions are necessary. An active outdoor life he must lead, but not in the smoky, grimy, germ-laden atmosphere of the great cities, nor in the thick, foggy, humid air of the forests, of the lowlands, or the sea coast. Malaria is the mother of consumption, and wherever calomel and quinine are most extensively used, there consumption is the most prevalent, and gathers its harvest. A prompt and rapid flight to a more favorable climate is the only hope of salvation. Where is this climate? Not along the sea coast, for the vapor-laden salt air causes the

rapid decomposition of the lung tissues in tubercular consumption. Not the pine forests of the Southeast, nor those of Oregon and Washington, nor the semi-tropical swamp lands of Florida, Cuba, or the Gulf Coast, for the warm, moist air relaxes the tissues and blood vessels, and enervates the whole system. Where malaria and the various climatic fevers prevail, consumption can only be aggravated and quickened in its destructive action.

A HOME ON THE RANCH.

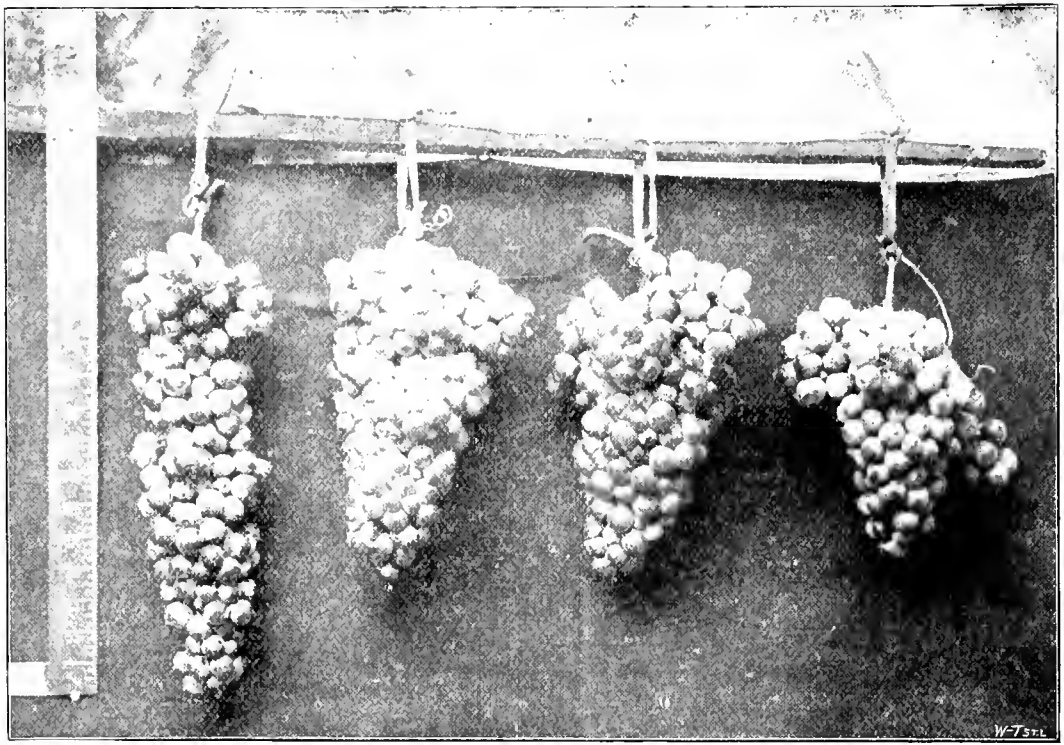
The place of refuge is where the sunshine is almost continuous the whole year round, and a rainy day or a cloudy day is a matter of remark; where there is no stagnant water, and the annual evaporation is from 70 to 90 inches, from five to seven times as much as is the annual rainfall; where the ordinary thermometer in mid-summer registers 100 degrees in the shade, and the wet bulb thermometer hanging beside it, registers 55 degrees at the same time; where the evaporation from a porous earthen jar will cool the water within, on a hot day, almost as cold as ice water; where the carcass of a horse or cow does not putrefy, but simply dries up and is

devoid of odor; where a horse can travel 80 miles in a day and show no sign of lathering; where a man can sleep on the ground in the open air and arise refreshed and invigorated in the morning, and where malaria and sunstroke are utterly unknown.

The place to be sought for is where the sky is of the deepest blue, where the waters rush rapidly, sparkling, purling and roaring over the rocky beds of their streams, and where the denizens of the deep make a vigorous fight for life, when caught on a hook; where the mountains, a hundred miles away, appear to stand on the next section corner, and distance cannot be estimated by any standard of measurement by the eye, practical elsewhere in humid climates; where the heavens are in all their glory at night, each star a brilliant light, scintillating, twinkling more brightly than elsewhere because of the absence of heavy moisture-laden vapors; where every day in the year the sick, the men, women and children, can be out of doors, walking, riding, or driving; where there are no sick, in fact, except those who come there for their health.

There is such a country, many hundred miles in extent, little known as yet, but highly appreciated by those who have shared its benefits. Being new and but thinly settled, it could for a time afford but few of the comforts deemed necessary by the fashionable health seekers, but for one with moderate demands, there were ample accommodations. Outdoor exercise, activity in the open air are necessary, and the feeling of homesickness, ennui, fostered by a prolonged stay in any one particular place, must be overcome by frequent changes of abode. The places advised to be visited in this region for a longer or shorter period are the following:

Big Spring, Howard County, Texas. Altitude 2,400 feet; population 1,500, mostly merchants, railway employes and ranchmen.



A SPECIMEN OF TEXAS GRAPES FROM MIDLAND.

Hotel accommodations good and at moderate cost. Attractions: Overland trips to surrounding ranches, to San Angelo and Concho River; quail, plover, rabbits, and small game of the prairies, and ducks and curlew in season. Write Jno. D. Birdwell, for hotel rates and other information.

Midland, Midland County, Texas. Altitude 2,850 feet; attractive town of 1,500 inhabitants, surrounded by small irrigated orchards and vineyard. Good hotel accommodations. Attractions: Overland trips to surrounding cattle ranches. For information address Proprietor Llano Hotel.

Barstow, Ward County, Texas. Altitude 2,600 feet; population 200; hotel accommodations primitive; good beds and table with private families. Attractions: Irrigated farms, surrounding town and overland tours to Davis Mountains, Toyah Valley, etc. For information address Geo. E. Briggs, Barstow, Texas.

Pecos City, Reeves County, Texas. Altitude 2,580 feet; population 1,500; mercantile and live stock interests; medicinal artesian waters; hotel accommodations primitive; better with private families. Attractions: Overland tours to cattle ranches, Fort Stockton and Fort Davis, both attractive health resorts, Toyah Lake for bathing and boating, Toyahvale and Victoria for hunting and fishing. For information address R. D. Gage, Pecos, Texas.

Grand Falls, Ward County, Texas. Altitude 2,500 feet; population 400; first-class hotel for a limited number; sanitarium for consumptives. Attractions: Irrigated farms, overland tours to cattle ranches, Davis Mountains, Fort Stockton, Toyah Lake and Toyah Creek, reached by stage line via Monahans Station, or by private conveyance via Barstow and Pecos. For information address Grand Falls Irrigation and Improvement Company.

Eddy, Eddy County, New Mexico, via Pecos City, Texas. Altitude 3,100 feet; beautifully situated on bank of Pecos River, in the midst of 25,000 acres of farms, orchards and vineyards; population 2,000; first-class hotel and excellent private accommodations for visitors. Attractions: Irrigated farms and orchards, Avalon Lake, Mac Millan Lake, for boating and fishing; Black River, Pecos River, Seven Rivers, and Rocky Arroya, for scenery and bass fishing; overland tours to Guadaloupe Mountains, Guadaloupe Cave, Rush Ranch, Sulphur Springs, and foot-hills. Large game, such as black tail deer, black bear, turkeys, etc., abundant in the mountains, small game, such as quail, doves, plover, curlew, ducks, geese, rabbits, etc., within easy reach of town. Write to R. W. Tansill for information.

Roswell, New Mexico, via Pecos City, Tex. Altitude, 3,900 feet. A stirring little city of 2,000 people; well built and attractive. Hotel accommodations fairly good, can also be had in private families. Attractions: The most beautiful irrigated area of 25,000 acres in the United States, with orchards that cannot be matched anywhere. Overland trips through exquisite mountain scenery to Lincoln, Nogal, Fort Stanton, El Capitan Mountains, White Mountains, and Apache reservation. Large game abundant in the mountains. Mountain trout in the Rio Ruidoso and Rio Bonita, tributaries of the Hondo; and bass and perch in abundance in North and South Spring Rivers, the Berrenda River, and the Bottomless Lakes, all in the vicinity of town. Sulphur and other medicinal artesian waters. For information address Roswell Commercial Club.

Toyah Station, Reeves County, Tex. Altitude, 3,000 feet. Population 200. Good hotel, and artesian sulphur water. Attractions: Overland tours to cattle ranches to Fort Davis, Lympia Cañon, Phantom Lake, Davis Mountains, and Toyah Creek Valley. For information address C. M. Blair.

Toyahvale, Reeves County, Tex. Altitude, 3,300 feet. Population about 50 Mexicans. Reached by private conveyance from Pecos and Toyah. Magnificent scenery, irrigated farms, excellent fishing and small game, such as ducks, quail, curlew, doves, in greatest abundance. Phantom Lake and Lympia Cañon within easy reach. Camping outfit required.

Toyah Lake and **Creek,** 12 miles south of Pecos City, and reached only by private conveyance. Excellent salt water bathing, good hunting along the lake, and fine fishing along Toyah Creek, on road to Toyahvale. Camping outfit required

Sierra Blanca, El Paso County, Texas. Altitude, 4,700 feet. Railway junction, with a good hotel. Attractions: Overland tours to Carrizo Mountains, Eagle, Diabolo and Quitman Mountains; mining camps, Hot Springs and splendid scenery. Camping outfit necessary.

Ysleta and **San Elizario,** in El Paso County, Texas. Altitude, about 3,800 feet. Somnolent Mexican towns, of great antiquity, amid fine orchards, vineyards and farms. Hotel accommodations, for a limited number, very good. The man who invented sleep was born here, and those seeking a rest can find it here.

El Paso, Texas. Altitude, 3,717 feet. This beautiful city of 20,000 people, convenient to quick and easy transportation to and from all directions, practically the half-way house between the Atlantic and Pacific Oceans, and between Denver and the City of Mexico, has been the Mecca of the health-seeker and the resting place of the tourist for nearly a quarter of a century. Those that have been there carry with them a recollection of days pleasantly spent, and many a one has made the city his permanent home, because he dared not live elsewhere. El Paso offers to visitors all the attractions of city life and all modern conveniences, and a more pleasant permanent or temporary abiding place can not be found. From El Paso can be reached the Mexican cities of Juarez, Chihuahua, the City of Mexico, and the numerous other cities on the Mexican Central Railway; the many hot springs and health resorts in southern New Mexico; the glorious scenery in the Sierra Madre Mountains, to the southwest of El Paso; the beautiful scenery on the Rio Grande, and the Raton and Glorieta Mountains to the north, and northeasterly the Sacramento and the White Mountains, from 12,000 to 14,000 feet above sea-level. In the immediate neighborhood are Juarez, with its quaint cathedral, built 300 years ago, and its ancient Indian and Mexican architecture, in strong contrast with the fine brick and stone structures of to-day. For 25 miles southeasterly are splendid drives, through orchards, gardens, farms and vineyards, to Ysleta and San Elizario on the American side, and other ancient, sleepy villages on the other. Up the river a mile or two are the great ore smelters, and further up more orchards and vineyards, and north of town, nestling against the great Franklin Mountain Range, Fort Bliss and its garrison of American soldiers. For local information, write to B. F. Darbyshire, or A. P. Coles, El Paso, Texas.

JANUARY PLOWING IN TEXAS.

Full Information

In regard to tickets, rates, routes, connections, will be furnished; copies of folders, time tables, etc., sent; reservations in sleeping cars made; and the general comfort of passengers looked after, on application to any of the gentlemen named below:

NEW YORK.
R. H. CARRINGTON, Eastern Passenger Agent.....391 Broadway.

LOS ANGELES, CAL.
T. F. FITZGERALD, Pacific Coast Pass'r Agent....230 S. Spring St.

EL PASO, TEX.
B. F. DARBYSHIRE..... .....Southwestern Passenger Agent.

PARIS, TEX.
W. F. BRAGGINS ....Commercial Agent.

PITTSBURG, PA.
S. H. THOMPSON, Passenger Agent ....1119 Liberty St.

CHICAGO, ILL.
BISSELL WILSON, Dist. Pass'r Agt., Mo. Pac. R'y 111 Adams St.
W. B. TOWNSEND, T. P. and L. Agt., Mo. Pac. R'y, 111 Adams St.

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